AUGUST, 1954

35 cents

Lumberman

THE PRODUCTION JOURNAL OF THE FOREST INDUSTRIES

FEATURES

This Is a Tree Country
Sawlog Barker Review
European Forestry Impressions
Logging and Hauling Are Linked

A Miller Freeman Publication

COVER PHOTO

A recent sawlog barker installation has been made by Union Lbr. Co., Fort Bragg, Calif. Here two cranes are loading logs into the haul for trip to barking chamber

This No. 12 is one of the Caterpillar fleet working for Hammond Lumber Co., Trinidad, California. Other units include twenty-four D8s, three DW20s with No. 20 Scrapers and three DW10s with No. 10 Scrapers.

This picture was taken about a year ago on the Big Lagoon show of the Hammond Lumber Co., Trinidad, California. Now there's a 34-foot-wide road here—the kind that pays off *three ways*. Surfaced with river-run gravel, it enables trucks to make *fast hauls* with *heavy loads* of redwood and fir with *minimum wear* on tires and trucks.

These savings *started* with the building of the road. For low-cost construction, the company relies on Caterpillar equipment—wheel-type tractors with scrapers, track-type tractors with bulldozers and this CAT* No. 12 Motor Grader, which is also used for maintenance. Like all rugged yellow machines, the No. 12 is engineered to *outwork*, *outsave* and *outlast* any competitive unit. More than nine out of ten Caterpillar Motor Graders ever built are still *actively* on the job!

Every feature of the No. 12 contributes to *big* production. For example—power, weight and speed are *balanced* for maximum performance in any gear. Without leaving the seat, the operator can move the blade from full ditch cutting to bank sloping position *in less than a minute*. Sitting down, he has a clear view of front wheels, blade and job. And anti-coast brakes prevent creeping—the blade stays where it's put.

Get the complete facts about this rugged motor grader from your Caterpillar Dealer, nearby for service and information. Pick your toughest road building or maintenance job—ask him to demonstrate the No. 12 on it!

Caterpillar Tractor Co., San Leandro, Cal.; Peoria, Ill., U. S. A.

CATERPILLAR*

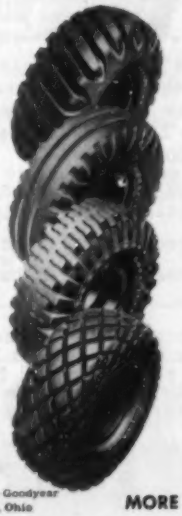
*Both Cat and Caterpillar are registered trademarks—®

NAME THE DATE... YOUR DEALER WILL DEMONSTRATE

MOTORIZED "SHOW" BRINGS HALF-MILLION FEET A DAY DOWN SIDE OF VOLCANO!

From gas-powered chain-saw felling to "piggy-backing" pole-trailers for their deadhead dash back up California's Mount Lassen, this J. T. McDonald operation uses every motorized short cut in the book. In fact, logging pioneer McDonald has invented many of them himself! As a result, a half-million board feet a day are coming out of this 30,000-acre mountain tract—including sorting and trucking to three widely separated mills!

GET THEM IN
3-T NYLON
FOR LONGEST LIFE EVER!



Road Lug, All-Weather—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

And Goodyear Was There — *is* there — will always *be* there — where tires, too, must keep rolling day after day with minimum down-time. Always outstandingly dependable, Goodyear tires are now more enduring than ever—for they're built with 3-T CORD!

Triple-Tempered (3-T) Nylon or Rayon Cord results from Goodyear's exclusive new process that controls cord stretch — keeps tires at their most bruise-resistant, heat-resistant point. This assures tremendous endurance, reduces cracking, tread and body failures to new LOWS, keeps tires fit to relug or recap. Look into this before replacing *any* tire.

Goodyear, Truck Tire Dept., Akron 16, Ohio

FOR EACH JOB, THERE'S A COST-CUTTING GOODYEAR TIRE!

GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

STANDARD ENGINEER'S REPORT

DATA

LUBRICANT: Calol SA Grease

UNIT: Anti-friction bearing — sawmill head-rig

CONDITIONS: Always wet — constant heavy pressure

PERIOD: 9 years

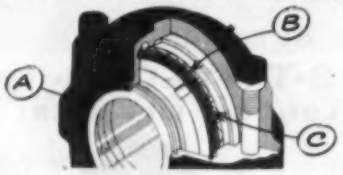
FIRM: Southern Oregon Sugar Pine Corp., Medford, Oregon

Special grease saves six days down time a year!

WORKING CONTINUOUSLY IN HEAVY MOISTURE while cutting water-soaked logs, this head-rig (left) used to lose an average of two bearings a year—requiring the mill to shut down for about three days each time. Calol SA Grease eliminated this loss of time and lumber output for the Southern Oregon Sugar Pine Corp., Medford, Ore. Since first used in 1943, Calol SA Grease has kept the head-rig working perfectly without bearing loss!

ONE OF THREE MILLS owned by the Southern Oregon Sugar Pine Corp., this one at Medford has a capacity of 150,000 board feet per day. Mill Sup't. Harold Allen says, "Calol SA Grease sure solved our problem. We pack our head-rig bearings with it every 90 days and haven't lost a bearing in more than nine years. That's one reason why we use Standard products 100% in all of our mills."

How to reduce wear in all types grease-lubricated machine bearings



Specialized CALOL SA Grease will provide constant lubrication where high bearing temperatures prevail—proved in temperatures up to 250°F and in bearings operating at 10,000 rpm.

A. Made from sodium-aluminum base...very high melting point minimizes seepage.

B. Feeds evenly to all bearing surfaces.

C. Remains soft in cold temperatures.

FREE CATALOG: "How to Save Money on Equipment Operation," a new booklet full of valuable information, is ready for you. Write or ask for your free copy today.

CALOL

TRADEMARK "CALOL" REG. U.S. PAT. OFF.

STANDARD TECHNICAL SERVICE checked this product performance. For expert help on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write Standard Oil Company of California, 225 Bush St., San Francisco.

STANDARD OIL COMPANY OF CALIFORNIA

THE Lumberman

The Production Journal of the Forest Products Industries Since 1889

AUGUST, 1954 VOLUME 81, NUMBER 9

FEATURES IN THIS ISSUE

LIST OF INDUSTRY MEETINGS	16
Late Forest Industries News	8-12-16
Fertilizer Spread by Air	20
"Tall Timber"—featuring Ali J. Sandoz	24
From Woods & Mills	28
National Plywood Distributors Assoc. Elects	41
This is a Tree Country	57-57
Logging and Hauling are Linked	62-63
Caldor Lbr. Co. Salvages Sinkers	67
BARKER REVIEW	
"What Barker Shall I Install?"	68
Two Problems Solved by Two Barkers:	
Union Lumber Co.	74
Burnt River Lumber Co.	75
More Chips are Obtained (Harris Pine Mills)	80
Barge-Mounted Barker (C. D. Johnson Lbr. Co.)	86
Oscillating Arm Barker (Universal Lbr. & Box)	90
Floating Barker at B. C. Forest Products	94
Predrying Boosts Production	98
Filer Develops Power Device	104
Tow Bar Hitches Aid Logging Use	104
Logging in Switzerland—Report by George L. Drake	105
Longest Arches Built	112
Small Mill Cuts Specialty Product	114
Tractor Radio Links Crews with Towers	118
New Tractor "Pours it on" in Duty	120
Forest Products Research Society	123
Machinery & Equipment News	124-134
Log & Lumber Prices	134
Advertising Index	148

W. E. CROSBY, Editor
ALBERT ARNST, Managing Editor
LOUIS H. BLACKERBY, Associate Editor
WARD C. WILLIAMS, Associate Editor
W. J. KREBS, Southern Editor
CHARLES L. SHAW, Canadian Editor
J. B. OLSON, Advertising Manager
JAMES C. WALLACE, Business Manager
E. T. WANG, Eastern Sales Manager
STUART LEETE, Northern California Manager
A. W. PONSFORD, Southern California Manager

A MILLER FREEMAN PUBLICATION

MILLER FREEMAN, President
LAWRENCE K. SMITH, Vice-President
WILLIAM B. FREEMAN, Vice-President
MILLER FREEMAN, JR., Secretary-Treasurer

Publishing Office
239 E. Chicago St., Milwaukee 1, Wis. - BRoadway 6-5340

Editorial and Advertising Offices
71 Columbia St., Seattle 4, Washington - MAin 1626

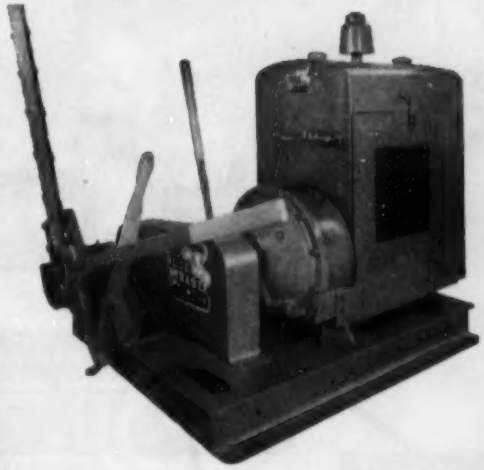
534 SW Third Ave., Portland 4, Ore. - - - - - - - - - - - - BEacon 6348
121 Second St., San Francisco 5, Calif. - - - - - - - - - - GArfield 1-5887
402 Pender St West, Vancouver 3, B. C., Canada - - - - - - - - - - MArine 7287
815 Witmer St., Los Angeles 17, Calif. - - - - - - - - - - - - DUnkirk 9-1112
3518 Dante St., New Orleans 18, La. - - - - - - - - - - - - - AMherst 2762
370 Lexington Ave., New York 17, N. Y. - - - - - - - - - - MUrray Hill 3-9294
1791 Howard St. (Rm. 308), Chicago 26, Ill. - - - - - - - - - - ROgers Park 4-3420

SUBSCRIPTION RATES: U. S., Canada, Mexico and other Pan American Union members—one year $3.00 two years $5.00 three years $7.00. Other countries—one year $4.00 two years $7.00.
CHANGE OF ADDRESS: Please send notice of change of address as early as possible, and include both old and new addresses, plus zone number, if new address is in a zoned city. Address: THE LUMBERMAN, 121 Second St., San Francisco 5, Calif.
ADVERTISING: Complete plates only should be sent to the Publishing office at Milwaukee. Advertising copy and cuts, instructions, and all insertion orders should be sent to the Seattle office.
Entered as second class matter at the Post Office Milwaukee, Wisconsin, under Act of March 4, 1879. Published monthly, except in March, when semi-monthly. Postmaster: Please send Notice 3579 to THE LUMBERMAN 121 Second St., San Francisco 5, California.

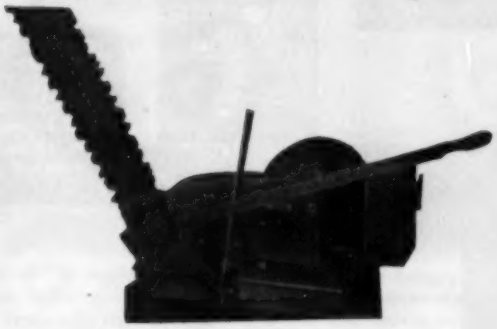
BLUE BABE Products

"BLUE BABE"

Pond and Deck Saws



GAS and ELECTRIC
5 to 20 HORSEPOWER



WE ALSO BUILD
RESAWS, BAND MILLS
& LOG TURNERS

Ask Your Dealer or Write for Details

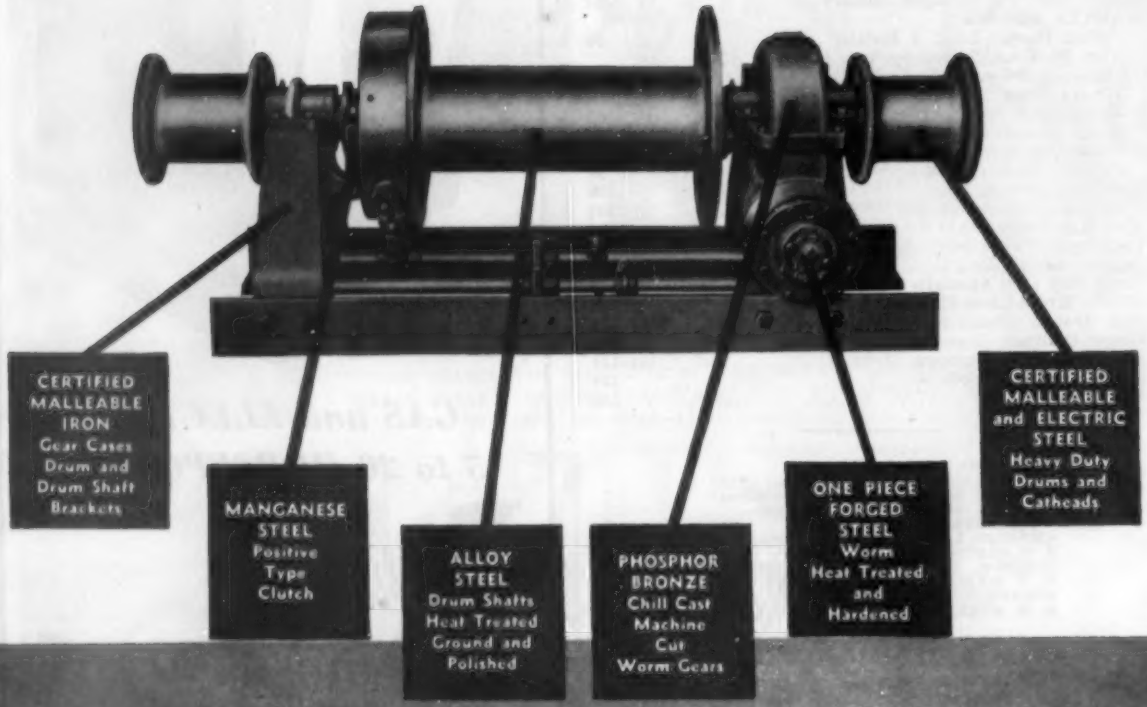
2516 N. W. 29TH AVE. *Industrial Division* PORTLAND, OREGON

NORTHWEST MARINE IRON WORKS
DESIGNERS OF SAWMILL AND LOGGING EQUIPMENT

DON'T WISH FOR

ADVANTAGES

WE *Already* OFFER


CERTIFIED MALLEABLE IRON
Gear Cases Drum and Drum Shaft Brackets
MANGANESE STEEL
Positive Type Clutch
ALLOY STEEL
Drum Shafts Heat Treated Ground and Polished
PHOSPHOR BRONZE
Chill Cast Machine Cut Worm Gears
ONE PIECE FORGED STEEL
Worm Heat Treated and Hardened
CERTIFIED MALLEABLE and ELECTRIC STEEL
Heavy Duty Drums and Catheads

Rugged in construction, yet delicate in operation, cab-operated Tulsa truck power winches are built of the finest available materials. Tulsa Winches are available in 28 models, in capacities from 6,000 to 80,000 pounds to meet every winching requirement. For power with safety, specify

*Reg. U. S. Pat. Off.

Tulsa* Winch
TULSA OKLAHOMA DIVISION OF VICKERS Inc.

THE WORLD'S LARGEST MANUFACTURER OF TRUCK POWER WINCHES

300 MILLION FEET ain't hay!

● This veteran went to work in 1942. It is owned by the Mac Gregor Logging Co. on a contract logging job for Boise Payette at Idaho City. In the period between 1942 and the present this machine has loaded over 300 million feet of logs. You average it out! In any man's language that is output.

Northwest brings you a compact unit that gets itself around the woods easily on crawlers that have been tested in years of service. Northwests are recognized for their freedom from "down" time and Northwest design makes upkeep easy. The "Feather-Touch" Clutch Control makes operation easy without resorting to delicate mechanisms that require special knowledge for proper maintenance. Uniform Pressure Swing Clutches eliminate the jerks and grabs that make spotting difficult and slow.

Convertibility permits handling other work on a small show and adds value for the man that buys it from you. Many other Northwest advantages help to cut costs and increase output for profitable operation.

Let us tell you about *all* Northwest advantages. There are many other features you should know about. Ask a Northwest Man!

If you require rubber tired equipment ask about Northwest Truck Cranes. They bring you a combination of advantages in both Crane and Carrier not found in other similar equipment.

NORTHWEST ENGINEERING COMPANY
1510 Field Building, 135 South La Salle Street, Chicago 3, Illinois

NORTHWEST

NORTHWEST SALES OFFICES:

SEATTLE, WASHINGTON
1234 Sixth Ave. South

SAN FRANCISCO, CALIF.
255 Tenth Street

LOS ANGELES, CALIF.
3707 Santa Fe Ave.

"Builds Haul Roads

BACH & GRAMES' TD-24 WITH DOZER building 6 miles of truck roads, plus skid trails, in Lola National Forest near Missoula, Montana. *"It can build haul roads faster than any other crawler,"* says Partner Wayne Grames.

Faster than any other crawler"

BACH AND GRAMES, Missoula, Mont., logging contractors, used the power and speed of the TD-24 to build haul and skid roads to move out two million board feet of timber. Then the big red crawler went to work skidding logs.

"Big Red"—the INTERNATIONAL TD-24 goes through rock and mountain jungle on Lola National Forest contract for Bach & Grames

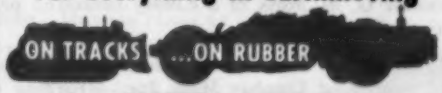
The power and agility of the Big Red TD-24 built the truck roads and skid trails and then helped bring out the logs.

"I find the TD-24s are selling themselves for building logging roads in the logging country," says Wayne Grames, partner. *"Through mountain jungle or solid rock, the TD-24 can build roads faster than any other crawler!"*

If you haven't seen a TD-24 in operation —if you don't know what the speed, power, and economy of "Big Red" can do for you—you're missing the biggest news in the logging industry in years. See the man who has the answers—your INTERNATIONAL Industrial Distributor. Ask for a demonstration on your own show—you'll be a TD-24 man from then on!

INTERNATIONAL HARVESTER COMPANY
CHICAGO 1, ILLINOIS

For everything in Earthmoving



See INTERNATIONAL'S Complete Earthmoving Line

POWER THAT PAYS

INTERNATIONAL

INTERNATIONAL HARVESTER

The LUMBERMAN'S LATE FOREST INDUSTRIES NEWS

• Log Transportation will be the theme of the 45th Pacific Logging Congress to be held at Portland, Ore., October 25, 26, 27. Roy A. Gould, Portland, president of the Diamond Lumber Co., is president of the Congress.

• Dr. H. H. Koessler, president of the Intermountain Lumber Co., Missoula, Montana, has been appointed a member of the National Board of Field Advisers of the Small Business Administration. Dr. Koessler is a flying enthusiast and recently piloted his Cessna 180 from Missoula to Alaska.

• R. W. Vinnedge, North Bend, Wash., past president of the Pacific Logging Congress and the West Coast Lumbermans's Association and for many years one of the country's best known lumbermen, died suddenly in late July. In recent years Mr. Vinnedge's major interests were in Alaska mining.

• J. T. Fleishel, president Fleishel Lumber Co., St. Louis, Mo., A. J. Glassow, manager Brooks-Scanlon Lumber Co., Bend, Ore., John B. Veach, president Hardwood Corporation of America, Ashville, N. C., Robert S. Douglas, general manager Weyerhaeuser Sales Co., St. Paul, Minn. Frost Snyder, Vancouver Plywood Corp., Vancouver, Wash., have agreed to serve the St. Louis District Corp. of Engineers as part-time consultants to bring the Department of Defense multi-million dollar lumber procurement program more closely parallel to commercial practices and to prepare for the buying of lumber in the event of an emergency mobilization.

• Olin Industries Inc., a large producer of southern forest products, as well as many other commodities, has merged with the Mathieson Chemical Corp. The new firm is known as Olin Mathieson Chemical Corp. The company will have 43 plants in 24 states and 16 plants in foreign countries. The Olin company acquired the Frost Lumber Industries properties in Louisiana, several years ago. Olin recently announced plans to build a new cellophane plant near Red Bluff, Calif., providing waste disposal can be accomplished satisfactorily.

• Charles Jellison, contract logger of Kalispell, Mont., and Intermountain Logging Conference treasurer, won nomination as state Republican senator by defeating veteran senator G. M. Moss in a closely contested primary election of late July.

• Eddie L. Quirk has been chosen to head the Flagstaff Division of Southwest Lumber Mills, Inc., according to president J. B. Edens. Quirk assumes his new post on August 1. He succeeds Freeman Schultz. Until his appointment, Quirk had been manager of the McNary plant of Southwest. He previously had been logging superintendent for Edens-Birch Lumber Company at Corrigan, Texas.

• Chris Wahl, Sr., Weyerhaeuser Timber Co. logging superintendent at Castle Rock, Wash., died recently in Seattle following a short illness. He had been with the company since 1923 and formerly lived at Montesano and Snoqualmie Falls, Wash. He was a brother of Weyerhaeuser's logging manager, John Wahl, Tacoma.

• National Plywood co-op., Independence, Ore., has awarded contracts for veneer machinery and plant construction. It is predicted by the management that the green end will be producing by year's end.

• Another Weyerhaeuser veteran, Hugo Johnson, also passed away recently. He was assistant manager of the Vail, Wash., operations of the company and at one time had been with the old Clemons Logging Co., which logged the land now managed by Weyerhaeuser as the Clemons Tree Farm.

• The Georgia-Pacific Plywood Company in July completed the purchase of valuable old-growth timber stands in Oregon adjacent to one of its other large timber operations in a deal involving more than $12,000,000. In the transaction Georgia-Pacific acquired all of the stock of Inman-Poulsen Lbr. Co., Western Logging Co., and Saginaw Timber Co., all of Portland, and what is known as the Grand Rapids Timber Tract. The liquidation of current assets from the acquired companies returned approximately $6,000,000 to Georgia-Pacific.

• Hazelton Forest Products, Ltd., has been organized in Vancouver, B. C., to acquire and develop some of the timber holdings of the late Olof Hanson, pioneer Prince Rupert lumberman, who died last year. Charles W. Brazier, Vancouver lawyer, is president. Partners are Ian McDiarmid and Harvey McDiarmid. Most of the timber to be taken over lies along the Canadian National Railway between Moricetown and Terrace. Included in the deal are six lumber yards. The McDiarmid brothers have been in the lumber business for some time. Ian will be vice pres. in charge of production, Harvey vice pres. in charge of sales.

• Baxco Corporation has completed work on its wood preservation pressure treating plant at The Dalles, Ore. Facilities have now been added which permit pressure treatment with pentachlorophenol and chemonite in addition to creosote and creosote mixtures. Additional facilities added to accommodate pentachlorophenol and chemonite preservative treatments include a pressure treating cylinder, warehouse, tank farm and storage tanks.

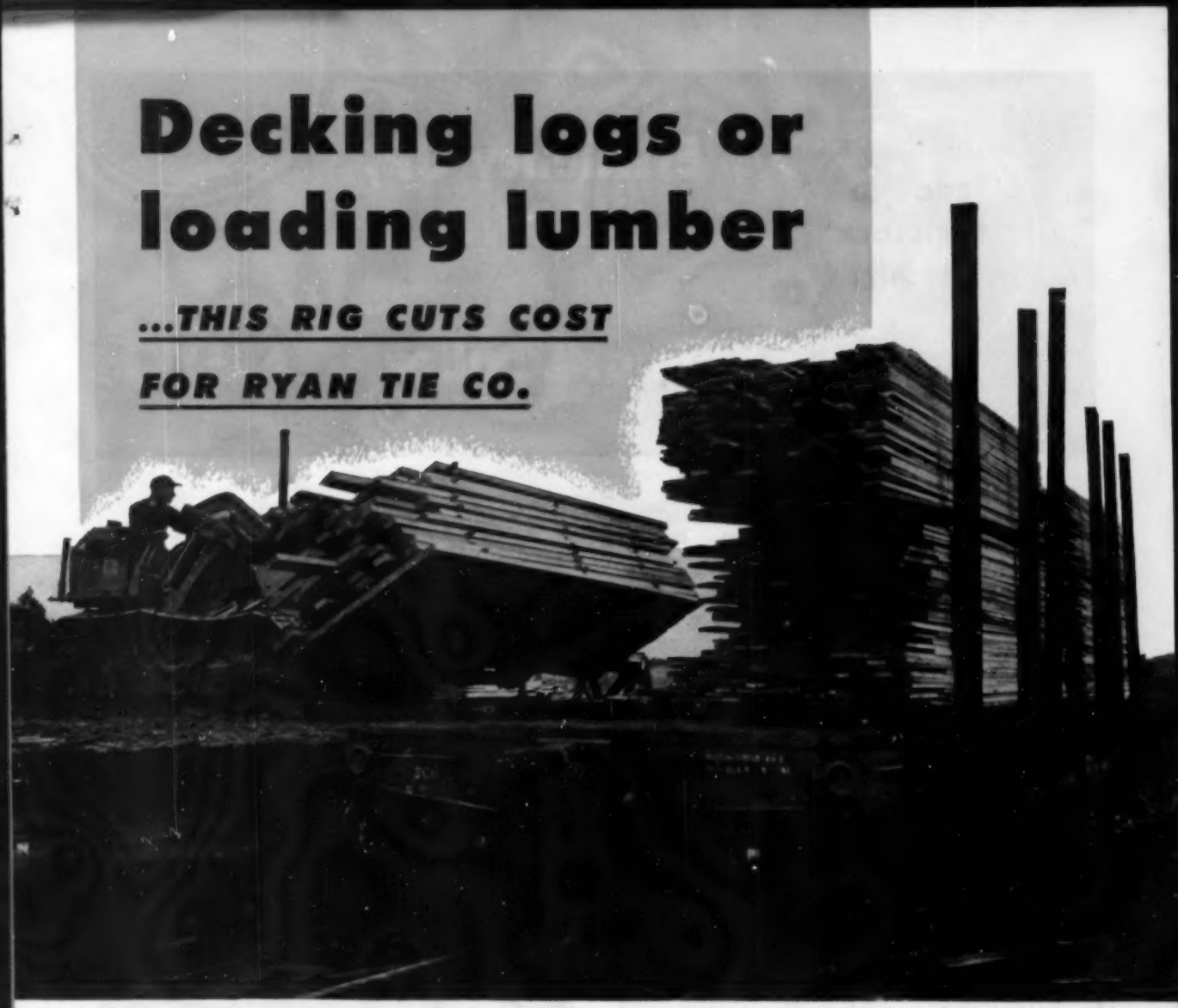
• Articles of incorporation have been filed in Salem, Ore. by Silver Tip Logging Co., Portland, with capitalization listed at $450,000. Signing were Paul L. Boley, Thomas B. Stoel and Frederick H. Torp.

• The H. and O. Lumber Co., South Bend, Wash. has been sold to R. A. and Ace Heintz, partners in Portland, Ore. construction and interstate hauling companies.

• The Southern Oregon-Northern California Dry Kiln Club met at Bend, Ore. in July. Members inspected the dry kilns and new sawmill at the Leonard Lundgren Lumber Co. New officers installed are, Pres.: Lyle Hickman, Klamath Falls; Vice Presidents: Dolph C. Byrd, Prineville, Ore. and Ralph G. Sloan, Glendale, Ore.; Treas., Tom McGraw, Medford, Ore. The club's next session will be McCloud, Calif. on Sept. 10.

Decking logs or loading lumber

...THIS RIG CUTS COST FOR RYAN TIE CO.



This rugged CAT* HT4 Shovel with lift fork does *double duty* for Ryan Tie Co., Fernwood, Idaho. Here you see it handling lumber, which it loads on flat cars. On a 200-ft. haul, its average production in a 10-hour day is 45,000 bd. ft. On its other job, decking logs in the yard, it handles an average of 50,000 bd. ft. of fir, larch and pine in 10 hours. It *cuts costs* on *both* jobs.

"It works well where the ground is rough or muddy, where ordinary lifts won't work," says Lloyd C. Russell, general manager for Ryan. "Decking logs, it saves two men over the operation we used before. It also saves two men loading lumber."

Check over your equipment line-up—are you losing money by not using this rig? Like all Caterpillar equipment, it's engineered and built to deliver *more* work at *lower* cost with *less* down time than any competitive unit. Power is matched to work capacity. Its extra-strong lift arm construction enables it to handle heavy loads. A box section cross-brace ties the arms together, preventing twisting and excessive wear. And it has the reach, height, balance, maneuverability, good visibility and smooth control necessary for *big* production, not just when the going is easy, but also when it's tough.

Give the HT4 a tryout in your yard—your Caterpillar Dealer will be glad to demonstrate under working conditions. He's as close as your phone for information and service. Call him today!

Caterpillar Tractor Co., San Leandro, Calif.; Peoria, Ill., U. S. A.

CATERPILLAR*

*Both Cat and Caterpillar are registered trademarks—®

USE CAT EQUIPMENT FOR MONEY-MAKING PERFORMANCE

AROUND THE CLOCK REPORT:

Efficiency UP, Costs DOWN at Willamette National Lumber

Operating on a rigid 24-hour schedule, Willamette National Lumber Co., Foster, Ore., subjects its costly machinery to the "toughest kind of service," yet reports no down-time due to improper lubrication.

Master mechanic Lyle Warren, in charge of Willamette National's maintenance program, says that despite the exacting conditions under which the plant's equipment operates, efficiency has gone *up* and costs *downward*, since the General Petroleum lube engineering service was installed seven years ago.

"We've found there is no substitute for lubrication experience where costly machinery is concerned. G.P. has proven they have the know-how and the products to make our equipment run better for less," Warren reports.

Master mechanic Lyle Warren, left, inspects operation of edger. Like all other machinery at Willamette National Lumber, edger is protected with Mobil lubricants.

Large or small, your plant can benefit from General Petroleum's acknowledged leadership in industrial maintenance. Backed by more than 88 years of lube engineering experience, your local G.P. representative is the man to see for products and service designed to keep your machinery running better longer.

Prove it for yourself...

Call your nearby G.P. office today!

SOCONY-VACUUM

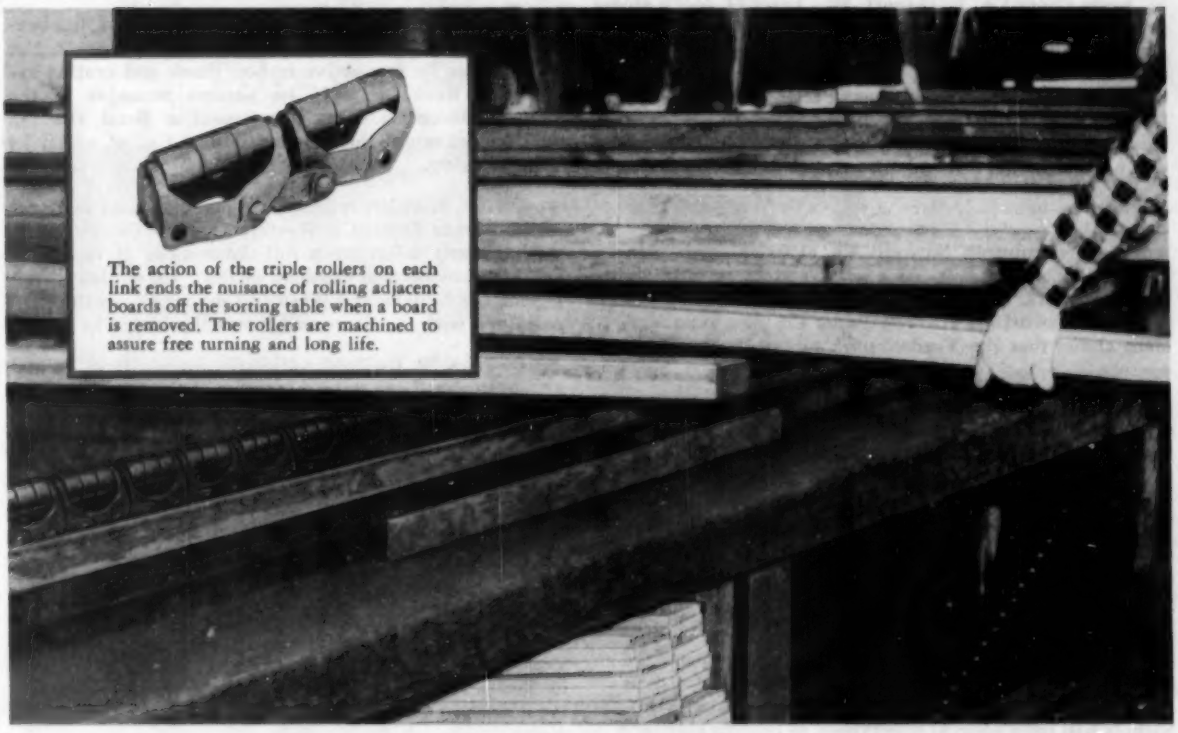
2-1006

GENERAL PETROLEUM CORPORATION

Converting nature's gift for better living

Aerial view of sprawling 200-acre Willamette National Lumber plant at Foster, Oregon.

Handle heavy boards quickly, easily with Link-Belt ROLLER-TOP chain



The action of the triple rollers on each link ends the nuisance of rolling adjacent boards off the sorting table when a board is removed. The rollers are machined to assure free turning and long life.

Another LINK-BELT chain engineered for specific job requirements

IN the above roller-top chain installation, heavy boards are sorted with increased ease and efficiency. And these are typical advantages that result from choosing the *right* size and type of chain for your particular need from the complete Link-Belt line.

Whatever your requirements, there's a Link-Belt chain engineered to provide efficient service at low cost. Look for the Link-Belt double ➤—◄ arrow trademark—your guarantee of longer chain life.

For the complete roller-top chain story, ask for Folder No. 2429. And see your nearest Link-Belt representative or distributor for information on the complete Link-Belt chain line.

LINK-BELT

CHAINS AND SPROCKETS

LINK-BELT COMPANY: *PACIFIC DIVISION:* Plants, Sales Offices and Factory Branch Stores at San Francisco 24, Los Angeles 33, Seattle 4. Sales Offices and Factory Branch Stores at Portland 9, Spokane 1, Oakland 7, Salt Lake City 1. Stock Carrying Distributors in Principal Areas.

No one chain serves every purpose . . . get the RIGHT one from LINK-BELT's complete line

Roof-top pintle chain—for transfer conveyors, each strand presenting a sturdy, moving ridge.

Class C combination chain—popular, durable, low cost design for elevators, conveyors.

Class SS bushed roller chain with offset sidebars—for heavy drive service at moderate speeds.

Class H pintle chain—excellent for conveyors that slide because of broad wearing surfaces.

Class H combination drag chain offers long life for tough refuse conveying. Rigid black links are reversible.

Late Forest Industries News

• The following six lumbermen, representing the forest industries, have been named members of the Committee on Natural Resources of the Chamber of Commerce of the United States.; George D. Bearce, general manager, St. Regis Paper Co., Bucksport, Me.; Peter D. Joers, vice president, Dierks Lumber & Coal Co., Mountain Pine, Ark.; H. Lueddemann, vice president and general manager, Pope & Talbot, Inc., Portland, Oreg.; E. C. Rettig, first assistant general manager, Potlatch Forests, Inc., Lewiston, Idaho; John B. Veach, president, Bemis Hardwood Lumber Co., Robbinsville, N. C.; Corydon Wagner, vice president, St. Paul and Tacoma Lumber Co., Tacoma, Wash.

• The Vredenburgh Sawmill Co., Vredenburgh, Alabama, has sold its properties in that state to pulp and paper interests. Purchasers included International Paper Co., Hollingsworth & Whitney Paper Co., The announcement stated that the Vredenburgh mill will continue to operate.

• Allan Haukon has been named assistant secretary and forester of the Northern Hemlock and Hardwood Manufacturers Association, Oshkosh, Wis. The appointment was announced by O. T. Swan, secretary-manager. Mr. Haukon has been executive secretary of the Wisconsin Forestry Advisory Committee of the State Conservation Department.

• Charles E. Nichols, logging manager, Crown Zellerbach Corp. Puget Sound operations, has been transferred from the Seattle to the Portland office to assume additional duties in the company's timber department. Mr. Nichols will have general supervision as logging manager over operations at Clatsop, Tillamook, and Columbia counties, and Brightwood, Ore., as well as the Puget Sound operations at Neah Bay. L. N. Rees continues as logging manager with general supervision over the Clackamas, Ore., and Cathlamet and Pacific county, Washington, operations.

• Ralph D. Dickey, who has been stationed in Portland, Ore., has been named resident manager of the Seattle Crown-Zellerbach headquarters office. He has been with the company since 1917. Kenneth C. Osier has been named president of the International Pulpwood Supply Co., Seattle and the International Pulpwood Supply Co., Ltd., Vancouver, B. C. He has been log and pulp wood buyer for Crown-Zellerbach and has been head buyer in the Seattle areas since 1949. Mr. Osier and Mr. Dickey succeed the late Oakley W. Dexter who died in May.

• Merging of the production and sales of matches, book match advertising and woodenware products into a single division of The Diamond Match Company and the appointment of key personnel for the new setup has been announced here by Robert G. Fairburn, president. General manager of the division will be Bradford O. Preu. General sales manager will be William M. Howard. F. C. Reynolds will be sales manager for all industrial woodenware products and paper candy sticks. Arthur H. Remmel was named western sales manager of the match and woodenware division with headquarters in San Francisco, California.

• Fred I. Stillings is being assigned to the Division of Timber Management at the Regional headquarters of the Forest Service in San Francisco, according to Regional Forester Clare Hendee.

• Joseph B. Knapp, well known Portland, Ore., lumberman, died recently after a long illness. He was 74. For many years he was active in box shook and crating association work. In 1916 he became manager of the Shevlin-Hixon Co.'s box department at Bend, Ore. In 1922 he organized the Wood Products Co., of which he was president.

• Kurt H. Koehler, retired vice-president and manager of the former Eastern & Western Lumber Co., Portland, died recently following a fall down steps at Gearhart, Ore. He was born in Portland in 1883. He started working for the Eastern and Western Lumber Co. in 1905 and remained with the firm until it was liquidated in 1946.

• Dr. John W. Duffield, nationally known forester and geneticist, has been named forester of the Forest Industries Tree Nursery at Nisqually, Wash. Duffield's assignment is to undertake the immediate goal of improving nursery stock for better survival and growth. His long term goal is forest tree improvement through the principles of genetics. He resigned as assistant professor of forestry at the University of Washington's College of Forestry.

• E. T. F. Wohlenberg is resigning his post as vice president of Masonite Corp. and general manager of its Ukiah, California, operation to fill the newly-created position of Professor of Industrial Forestry at Yale, first of its kind in America. He is a recognized industry leader and immediate past president of Western Forestry & Cons. Assoc.

• Gen. Lewis Pick, vice chairman of the board, Georgia-Pacific Plywood Co., Olympia, Wash. is being transferred to Auburn, Ala., to handle other aspects of company affairs in Washington, D. C., New York and the Southeast.

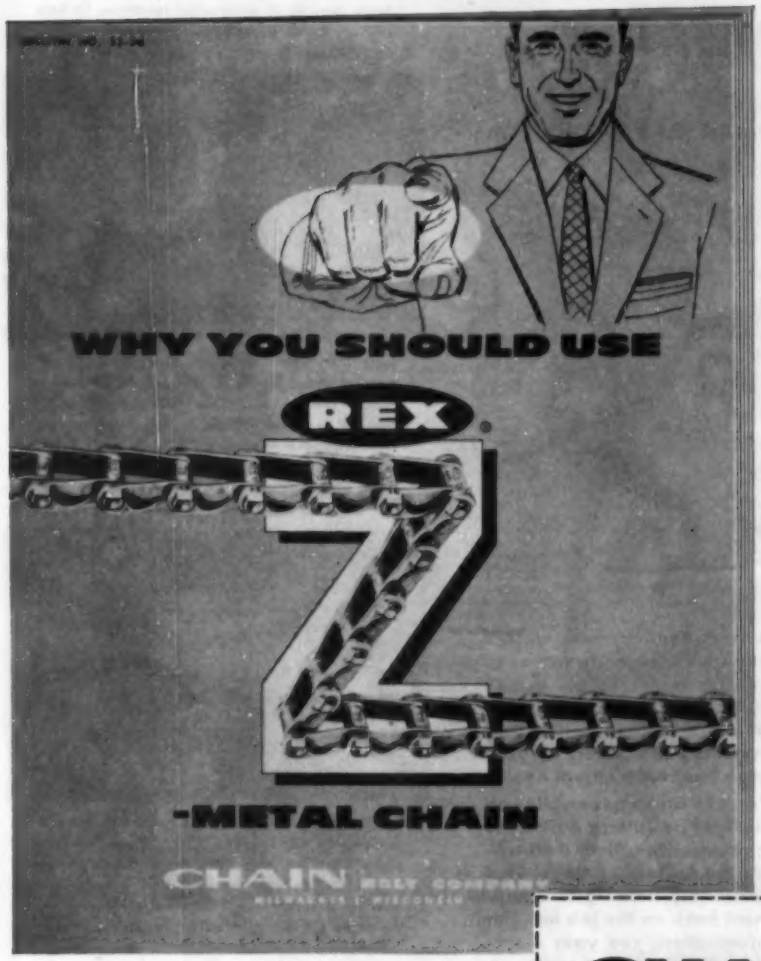
• The Trinity and Shasta National Forest in northern California have been administratively consolidated into a combined forest with headquarters located at Redding. The Goosenest District of the Shasta will become a part of the Klamath National Forest with headquarters at Yreka, Calif. The balance of the Shasta and the Trinity will be combined into one administrative unit to be known as the Shasta-Trinity National Forest. Paul W. Stathem, recently named Supervisor of the Shasta will be in charge of the newly consolidated unit. Stathem and a skeleton force will establish the Redding Office immediately.

• Paul M. Sanders, formerly woods manager for M & M Woodworking Co., Portland, Ore. has entered private forestry practice, with offices at 419 N. E. Hazelfern, Portland. Sanders has been engaged by the Miami Corporation, Chicago, Ill. to organize and manage its 15,000 acre Grande Ronde tract in Oregon. This area is well restocked and is planned for certification as a tree farm upon completion of the forest inventory.

• Hillman Lueddemann, vice-pres. and northwest mgr. of Pope and Talbot, Inc. has been named a director of Consolidated Freightways, Inc., Portland, Ore.

HERE'S PROOF

You'll get Better Service ...Longer Life with Rex Z-Metal Drive and Conveyor Chains



What's your problem... corrosion, abrasion, heavy pounding? What's causing your chain drives and conveyors to fail prematurely? This informative booklet has your answer...shows you how you can solve those problems with Rex® Z-Metal Chains. It proves why Z-Metal resists abrasion...corrosion ...takes heavy pounding... with plenty of actual case histories to back up our story.

Why not send for your copy today...see how you can get far better service *at a saving.* Just mail the coupon.

54-115

CHAIN BELT COMPANY

4653 W. Greenfield Ave., Milwaukee 1, Wis.

Please send my copy of Bulletin No. 53-56 containing the facts on the superiority of Rex Z-Metal Chains for my service.

Name.....

Company.....

Address.....

City.....*Zone*....*State*.....

District Sales Offices and Distributors in all principal cities.

Assemble Aeroquip Hose Lines Right in the Field...

IN MINUTES!

Quick Replacement of Fuel, Lube, Air and Hydraulic Lines Keeps Equipment on the Job!

The difference between minimum downtime and wasted hours often depends upon the speed with which a damaged fuel, lube, air, or hydraulic line can be replaced. If you operate mobile equipment, Aeroquip bulk hose and detachable, reusable fittings will provide a compact, portable inventory that meets all your hose line replacement needs.

You can make assemblies on the spot by cutting bulk hose to required length and attaching the reusable fittings. This "Aeroquip Idea" gets equipment back on the job *fast*. For information, see your Aeroquip distributor or write us.

Edmier, Inc., one of Chicago's leading firms dealing in excavating, grading and construction materials hauling, operates more than 100 trucks and a large number of construction machines. To help reduce downtime, a supply of Aeroquip bulk hose and reusable fittings is on hand at all times.

Hose line replacements are made as they are needed. Here, Orville J. Wiley, Edmier Maintenance Foreman, reuses an Aeroquip fitting to make a new assembly for a Hough Payloader. Aeroquip hose line replacements are used for hydraulic systems on trucks and construction equipment, air systems on drag lines and cranes, and for greasing equipment in maintenance shops.

It takes only a few minutes to get the Payloader back on the job. Says Mr. Wiley: "There isn't any doubt that Aeroquip hose can withstand more abuse and flexing than any other hose we've ever used. Safety wise, it's the best. Not only has Aeroquip cut our maintenance replacement cost in half, it has also contributed a great savings in downtime and hydraulic oil loss."

Aeroquip

REG. TRADE MARK

AERO-COUPLING CORPORATION

(A Subsidiary Of Aeroquip Corporation)

3015 Winona Avenue, Burbank, Calif.

SALES OFFICE and WAREHOUSE for OREGON, WASHINGTON and IDAHO: SPARKS-WILLS, INC., 1624 S. E. GRAND AVE., PORTLAND 14, ORE.

GM DIESEL
CASE HISTORY No. 5312-37

BOAT AND OWNER: Twin 28-foot boom boats "RIVER FORCE" and "CHEHALIS MASTER" owned by Dolmage Towing Co., Ltd., Ferry Wharf, Vancouver B.C.

INSTALLATION: Both boats powered by General Motors 6-71 Diesels turning 24" x 20" screw through 1.5:1 reduction.

PERFORMANCE: Boats "herd" logs into rafts for towing down-river to sawmills. Fuel costs: $1.50 per hour each. Fast maneuverability and instant response to controls helps boats position logs quickly in spite of fast currents and rapids.

It pays to STANDARDIZE on

GM
GENERAL MOTORS
DIESEL POWER

Roundup On the River . . . at $1.50 an Hour for Fuel

Herding logs into rafts on a river is a lot like herding cows at roundup time. Both jobs have strays ready to get away any second. And just like cow ponies on the range, boom boats have to be "fast on their feet."

That's why General Motors Diesels were used to power these two new boom boats. With 2-cycle operation they accelerate faster, respond instantly to the throttle, herd logs into rafts quicker. At the mill, the logs are often cut by a sawmill powered by GM Diesels—Diesels that burn fewer gallons of low-cost fuel, start at the push of a button, deliver smooth power day in and day out.

If you need power for any job, ask GM Diesel operators how they like their engines before you buy. Then see your GM Diesel distributor—or your equipment suppliers—about GM Diesel power in your equipment.

DETROIT DIESEL ENGINE DIVISION
GENERAL MOTORS • DETROIT 28, MICHIGAN
Single Engines . . . 30 to 300 H.P. Multiple Units . . . Up to 864 H.P.

Late Forest Industries News

• The Belgian Government has conferred upon Lawrence Ottinger, chairman of United States Plywood Corp., the coveted decoration of the "Croix l'Officer de l'Ordre Royal Du Lion" ("Cross of Officer of the Royal Order of the Lion") in recognition of his promotion of trade between the United States and the Belgian Congo. Clifford P. Setter, vice president of the company, the world's largest plywood enterprise, was awarded the "Croix de Chevalier de l'Ordre Royal du Lion."

• Kramer A. Adams, sportsman and outdoor writer, has been appointed recreation administrator for Weyerhaeuser Timber Co., Tacoma, Wash., in the department of public information. He will assist company branch operations in Oregon and Washington in planning public recreational programs for hunters, fishermen, campers and picnickers. Since 1947 Adams has been public information officer of the California Department of Fish and Game. Adams will also work with sportsmen's associations and conservation groups in formulating informational materials related to recreational activities on company forestlands.

• Barney Gallagher of Memphis, Tenn., secretary-manager of the Southern Sash and Door Jobbers association for the past 3 years, will represent M and M Woodworking Co. in the Southeastern and South Central areas of the United States. Gallagher has resigned his position with the sash and door jobbers group to assume responsibility in the territory formerly held by the late Reed P. Morse.

• The Hardwood Plywood Institute, stepping up its quality control program has named forestry expert Erle L. Biggs, Starke, Fla., to conduct a continuous plant inspection service. Biggs will be the first inspector to devote his time exclusively to such activity. Plans call for inspection visits to plants of all member companies.

• The Oregon State forestry department states that more than $5,500,000 will be spent the current fire season in protection of the 15,000,000 acres of forest lands under jurisdiction of the board of forestry and the cooperating forest patrol associations. One of the larger items is the $3,500,000 contribute by loggers. More than $1,000,000 of this will go for falling snags in the active logging operations. Purchase of new equipment such as tank trucks, automobiles, fire-fighting tools and similar equipment will cost $750,000.

• President Eisenhower signed into law in June a bill settling the status of some 462,000 acres of "controverted" forest lands in Oregon and releasing some $7,100,000 impounded revenues from them. The new law orders the 75 per cent payment for the controverted section, but vests their administration in the Forest Service. Impounded funds from the lands will be released to the counties. The remaining lands are in a checkerboard pattern of alternate square miles, with forest and public lands intermingled. The bill authorizes the Interior and Agriculture Departments to exchange sections to obtain solid blocks for administration by each agency.

• Marion N. Nance has resigned from the Bureau of Land Management, Spokane, Wash. to enter private forest practice, with offices in Spokane.

• Australia's biggest softwood sawmill was opened in Tumut, New South Wales, in June. The mill has an initial capacity of 6,000,000 super-feet of timber a year. It will be supplied with logs from the local forests, where the Forest Commission has planted more than 7,100 acres of softwood trees since 1924. The location is 277 miles from Sydney.

• The management of Salmon River Lumber Co., Inc., Riggins, Ida., has been departmentalized. Keith Angleton was named business manager, John Thompson, woods manager, and Don Brannon, plant manager. Jess Birtcher was recently appointed superintendent of kilns, yard and shipping.

• Donald B. Stickney has been named information specialist in the Division of Information and Education, Portland Regional office of the U. S. Forest Service. He obtained a Bachelor of Science degree in forestry at the University of Washington in 1939.

• Clyde Thompson, of Southern Pine Lbr. Co., Diboll, Texas, who was elected president of Texas Lumber Mfrs. Ass'n in a record turnout annual meeting, has named the following to the organization's executive committee: T. G. Tilford (chairman), Nacogdoches County Lbr. Co., Nacogdoches; S. B. Crawford, Edens-Birch Lbr. Co., Corrigan; J. C. Ferguson, Sabine Lbr. Co., Zwolle, La.; Paul F. Hursey, Southland Paper Mills, lumber division, New Willard; I. R. Palmer, Foster Lbr. Co., Houston; A. L. Carter (vice-chairman), W. T. Carter & Brother, Camden; Robert H. Evans, Frost Lumber Industries, Shreveport, La.; J. K. Herndon, Kirby Lumber Corp., Houston; E. L. Kurth, Jr., Angelina County Lbr. Co., Kelty; W. Temple Webber, Southern Pine Lbr. Co., Diboll. Al. E. Cudlipp, of Lufkin Foundry, began his 11th year as Association secretary.

LUMBERMEN'S CALENDAR OF COMING EVENTS

The American Forestry Association, Portland, Ore., Sept. 6-9, 1954.

Concatenated Order of Hoo-Hoo, Shamrock, Hotel, Houston, September 6-9.

Louisiana Forestry Association, Hotel Bentley, Alexandria, La., September 17.

National Hardwood Lumber Association, 57th Annual, Houston, Texas, October 5-7.

National Safety Congress, Chicago, October 18-22.

Society of American Foresters, Hotel Schroeder, Milwaukee, October 24-27.

Forest Products Research Society, Pacific Northwest Section, Corvallis, Ore., Oct. 25-26.

Pacific Logging Congress. Portland, Ore., October 25-27, 1954.

Governor's Industrial Safety Conference, Masonic Temple, Portland, Ore., November 18-19.

Fourth World Forestry Congress, Dehra Dun, India, December 4-6, 1954.

Western Forestry and Conservation Association Annual; San Francisco, December 7-10.

Forest Products Research Society, Annual National Meeting, Seattle, Wash., June 20-23, 1955.

West Coast Dry Kiln Club. Secretary announces discontinuance of all meetings until Fall, at which time a Seattle meeting will be announced.

Can a tractor have "ACID STOMACH"?

The answer is yes! And (as in people) it can lead to a serious breakdown — and a *costly repair job for you!* Here's an easy way to prevent this needless expense:

Did you know that all diesel fuels create quantities of harmful acid in your tractor's engine? How *much* acid is determined by the quality of the fuel and the way you run your tractor.

Tests show these acids corrode pistons, rings and cylinder walls at an alarming rate — actually destroying your engine *faster than friction!*

To neutralize these acids (present in every engine) Shell scientists created Shell Rimula Oil — an amazing *alkaline* oil with excellent cleansing and lubricating properties.

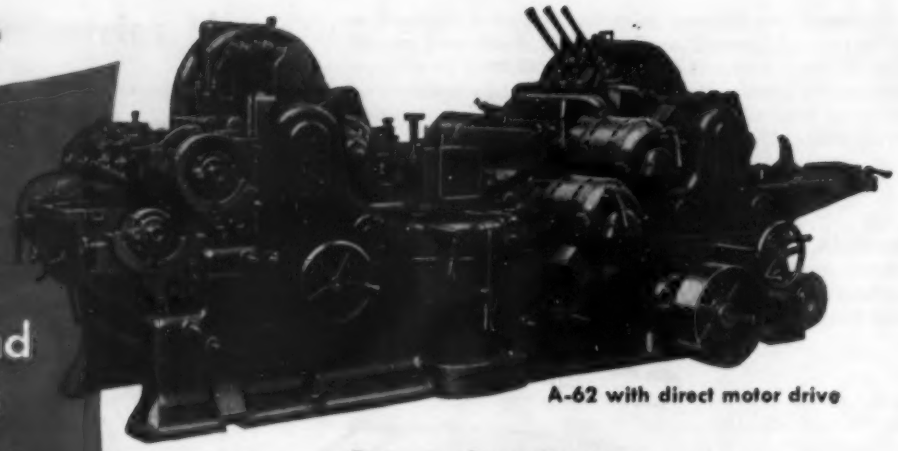
So effective is Shell Rimula Oil, it actually *stops* acid action—eliminating this major cause of engine wear!

So isn't it just good common sense to start using Shell Rimula Oil right away? The savings you'll make on maintenance can really add up!

for longer useful engine life between overhauls—
SHELL RIMULA OIL

SHELL

A-62 and A-20 Planers and Matchers



A-62 with direct motor drive

Choice of Millmen

who want the increased production and low cost operation which result from these outstanding features:

Belt Driven A-20

1. A machine tailored to your requirements — belt or motor driven; four, five or six cutterheads.
2. All hand adjustments made from front or operator's side of machine.
3. Quick release for pressure bar.
4. Quick—simultaneous adjustment on bottom rolls and plate before bottom head.
5. Wide open profiles for quick adjustment.
6. Unique design for top feed rolls results in smooth feeding with less break-ups.
7. Either machine can be furnished belt or motor driven.

Write today for literature on these modern, easy-to-run machines!

F-24 Feed Table—Substantially built for hard service. Spirally fluted rolls force stock to guide before entering matcher. Each piece carried rapidly forward to butt piece ahead, for continuous feed.

Yates-American

BELOIT, WISCONSIN

BRANCH OFFICES: CHICAGO, ILLINOIS; HIGH POINT, NORTH CAROLINA; MEMPHIS, TENNESSEE; PORTLAND, OREGON

MATCHERS
MOULDERS
SURFACERS
RIPSAWS
RESAWS
SANDERS

Save more money by handling bigger loads

—with the world's largest standard lift truck—26,000 lbs.

The Clark-Ross Y-260 will handle bigger outdoor loads than any other lift truck, and it will go places where no other lift truck can travel! This truck is big enough to handle jobs which formerly required a crane and operator, hook man and trucker. It has the utmost traction and flotation—huge 14.00 x 20 tires are standard front and rear, with excellent weight distribution and 9 in. minimum underclearance. Its 17½ ft. turning radius permits it to be used in yards laid out for smaller trucks.

This Y-260 is *built* for 26,000 lbs. (at 36 inches)—not just beefed-up. It's as easy to drive as a truck half its size; power steering and power brakes are standard. And a brake selection switch enables the driver to apply brakes to *either* drive wheel, when one wheel has lost traction in slippery grounds. Maintenance access is excellent, wrap-around counterweight has minimum over-hang, operator visibility is outstanding. In general, *this lift truck is a beautiful brute!*

For big jobs, you'll want more details on the Y-260. Call your local Clark dealer, listed in the Yellow Pages under "Trucks, Industrial," or send the coupon.

CLARK EQUIPMENT

Industrial Truck Division
Battle Creek 156, Michigan

Send details on Y-260

Name_____

Firm_____

Address_____

City_____

Box Association Authorizes Research

A decision was made at the regular summer meeting of the Pacific Division, National Wooden Box Association at Reno, Nevada, in June, to proceed with further research by Stanford Research Institute.

Authorized was a six month thorough research program in redesigning sawn wooden crates and boxes to meet the demands of changing methods of growing, packing and shipping fresh fruits and vegetables.

To offset reduction in revenue brought about by reduced footage shipments, directors decided to increase dues paid by association members by 3½c per thousand board feet, making a total of 16½c per thousand feet.

The over 40 members and representatives attending heard Curt F. Setzer, Glenco Forest Products, Sacramento, president of NWBA and C. D. Hudson, executive vice-president, NWBA, and officers of the Pacific Division, NWBA, give some straight from the shoulder remarks about *what* is being done in the wooden box industry and *what* can be done if the proper aggressive spirit is shown.

CHECKING INSTRUCTIONS (top) are Pilot BOB WARD, Central Aircraft, Yakima, Wash., and from left, JACK BLANCHARD, U. of W. student; Prof. STANLEY GESSEL, project leader; and RICHARD FREDRIKSEN, research assistant. Bottom, Pilot BOB WARD gets an assist in loading nitro-chemicals into Stearman biplane from JACK BLANCHARD, center, and RICHARD FREDRIKSEN.

Fertilizer Spread by Air

Aircraft, versatile tool of the forest industries, has found its latest application in chemical fertilizing of young-growth timber stands. If an experiment conducted on 15 acres of 20-25-year-old Douglas fir and minor species June 24 near North Bend, Wash., proves successful, the practice may become commonplace.

The trial run was a cooperative effort sponsored by the University of Washington's College of Forestry, with Prof. Stanley Gessel, in charge of the field work. Central Aircraft Co., Yakima, Wash., donated the time of pilot Bob Ward and use of a Stearman spray plane. Chemicals were "Nitraprills", a product of Consolidated Mining & Smelting Co. of Canada, Trail, B. C., donated by Balfour Guthrie & Co., Ltd., Seattle, and Du Pont's "New Green" supplied by Van Waters & Rogers, Seattle.

Central Aircraft has fertilized aerially in agriculture, but this is the first attempt of its type in forestry. Growth plots in both treated and adjacent untreated areas have been set up. At the end of next season, Prof. Gessel expects to determine preliminary results. Several years will be needed for final conclusions.

Chemicals were applied at the rate of 70 lbs. of nitrogen per acre. Because the chemicals (ammonium nitrate and urea compound) are so hygroscopic, they pass easily into the soil for absorption by the trees' root systems.

Chemical fertilization of timberland itself is not new, as the U. of W. has performed extensive ground tests in the past. The question to be answered by this test was: How practical and economical will it be from the air?

OSCAR HEDLUND
MILL & LUMBER CO.
OROVILLE CALIF.
uses
PRECO
Back-Rippers
• IN THE MILL POND • TO MAKE 'CAT' LANDINGS
• TO BUILD ROADS • TO EXCAVATE
RIPPING
The 4 shanks, capped with lock-on teeth, rip the ground when tractor backs up. Blade acts as depth gage.
BULLDOZING
When tractor moves forward, teeth drag on top of ground. No controls are required.
RETRACTED
Each tooth can be independently pinned up out of way. This permits making side cuts, trenches, and rooting—with one tooth or any other combination.

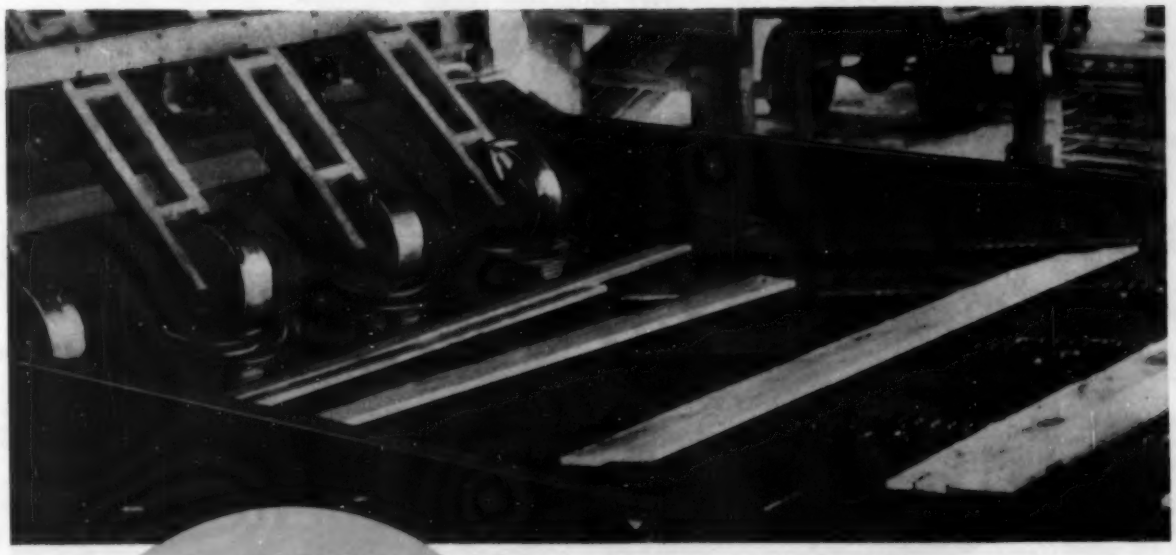
"Our Caterpillar D-7 Straight Blade Bulldozer is equipped with Preco Back-Rippers which we use for many jobs," says Oscar Hedlund, owner and operator of the Oscar Hedlund Mill and Lumber Company, Oroville, California.

"It normally takes us 5 days to clean our mill pond but this year, by using our Back-Rippers to pull out the sinkers, we did it in 3. We hooked the Rippers over the logs and broke the mud suction, then rolled them out with the dozer.

"On another job—excavating an unusually hard, blue deposit—the Back-Rippers actually paid for themselves by saving us rent on a pull ripper. Now our Back-Rippers are being used in the woods where we are constructing a 'cat' landing and we expect to use them later on road building jobs."

The versatility of these Preco Back-Rippers makes them a time and money saving *necessity* for bulldozers. See your "Caterpillar" dealer or write us for complete information.

PRECO
INCORPORATED
6300 E. SLAUSON AVE., LOS ANGELES 22
CABLE ADDRESS: PRELA



ask these five questions...

WHEN YOU BUY SAP STAIN CHEMICALS

1. **What type and percentage of *active* ingredients does the chemical contain?**
2. **What do authorities say about its effectiveness?**
3. **Does it prevent *both* sap stain and mold?**
4. **How many pounds of the chemical must be used to get effective control?**
5. **Can you depend on it during severe weather conditions?**

Use high-concentration Permatox 10-S for economical and efficient control of *both* sap stain and mold.

Permatox 10-S contains 35% technical sodium pentachlorophenate and 65% borax, both highly effective chemicals for control of mold and sap stain. Authorities say that Permatox 10-S represents the most efficient of the sodium pentachlorophenate-borax mixtures for general commercial use.

Permatox 10-S prevents *both* sap stain and mold in hardwoods and softwoods. Properly used, it gives dependable results under all weather conditions. Only 10 lbs. are normally needed for 100 gallons of dipping solution. Mixed with Chapman Ambrocide, it protects lumber against ambrosia beetles and other insects.

CHAPMAN®

PERMATOX 10-S

Prevents both sap stain and mold, in freshly cut hardwoods and softwoods

MAIL COUPON FOR FREE BULLETIN ON STAIN AND INSECT CONTROL

Chapman Chemical Company
Terminal Sales Building, Portland 5, Oregon or
Dermon Bldg., Memphis 3, Tenn.
Send copy of your Bulletin 51-S to
Name.....
Address.....
.....

now...

get extra power to stop heaviest loads under most abusive conditions...with

WORLD BESTOS "LOGGERS' SPECIAL" Brake Block Combination

• World Bestos LOGGERS' SPECIAL is for *big rigs* doing *big jobs!* It will stop tremendous loads safely . . . *every time* . . . down the steepest, twisting mountain roads, through mud and water.

Fully tested in severest logging operations . . . guaranteed NONFADING from heat or water! LOGGERS' SPECIAL uses *two* high friction Red Blocks in the famous RED BLOCK Combination.

"Double Red" gives the *extra stopping power* you need for the toughest, hottest jobs; reduces drum heat-checking to a minimum and gives exceptionally long life for such severe service!

Test a set of World Bestos LOGGERS' SPECIAL on your biggest, toughest job and you'll be convinced.

WORLD BESTOS
NEW CASTLE, INDIANA

For full information about LOGGERS' SPECIAL and other World Bestos Brake Blocks, contact one of these World Bestos Warehouses:

LOS ANGELES, CALIF., A. H. Ross & Co., 843 S. San Pedro St.
SAN FRANCISCO, CALIF., F. Somers Peterson, 524 Folsom St.
PORTLAND, OREGON, Sparks-Wills, Inc., 511 S. E. Market St.
VANCOUVER, B. C., Western Equipment, Ltd., 102 Main St.

want high speed plus endurance? How's this...

1000 HOURS at 3600 R.P.M. UNDER FULL LOAD!

If you were to drive 90,000 miles up an incline at 90 m.p.h., you would approximate the performance of the Model 24A, 331 cubic inch displacement Chrysler Industrial Engine pictured below.

To prove the power of Chrysler Industrial V8 Engines . . . their ability to run for long periods of time at high speed . . . on March 17, 1954 Chrysler engineers placed a production model Ind. 24A Engine on an endurance dynamometer at Chrysler Central Engineering Laboratories. Objective: 1000 hours operation at 3600 R.P.M. under full load.

During every one of the 1000 hours, the Chrysler Ind. 24A Engine delivered an average of 174 horsepower and when shut down, the engine was still in perfect operating condition.

During the run no service was necessary beyond minor maintenance care, such as oil changes and very infrequent spark plug changes and point adjustment. Yet, following disassembly of the engine, the only wear noted was negligible—no more than you might expect from an engine that has been operated for 1000 hours within a long period of time.

While there is every reason to believe that this is a record-breaking endurance run (and don't forget it was made at 3600 R.P.M. under full load), we are confident that every Chrysler Industrial V8 Engine will *at least equal* this astounding record.

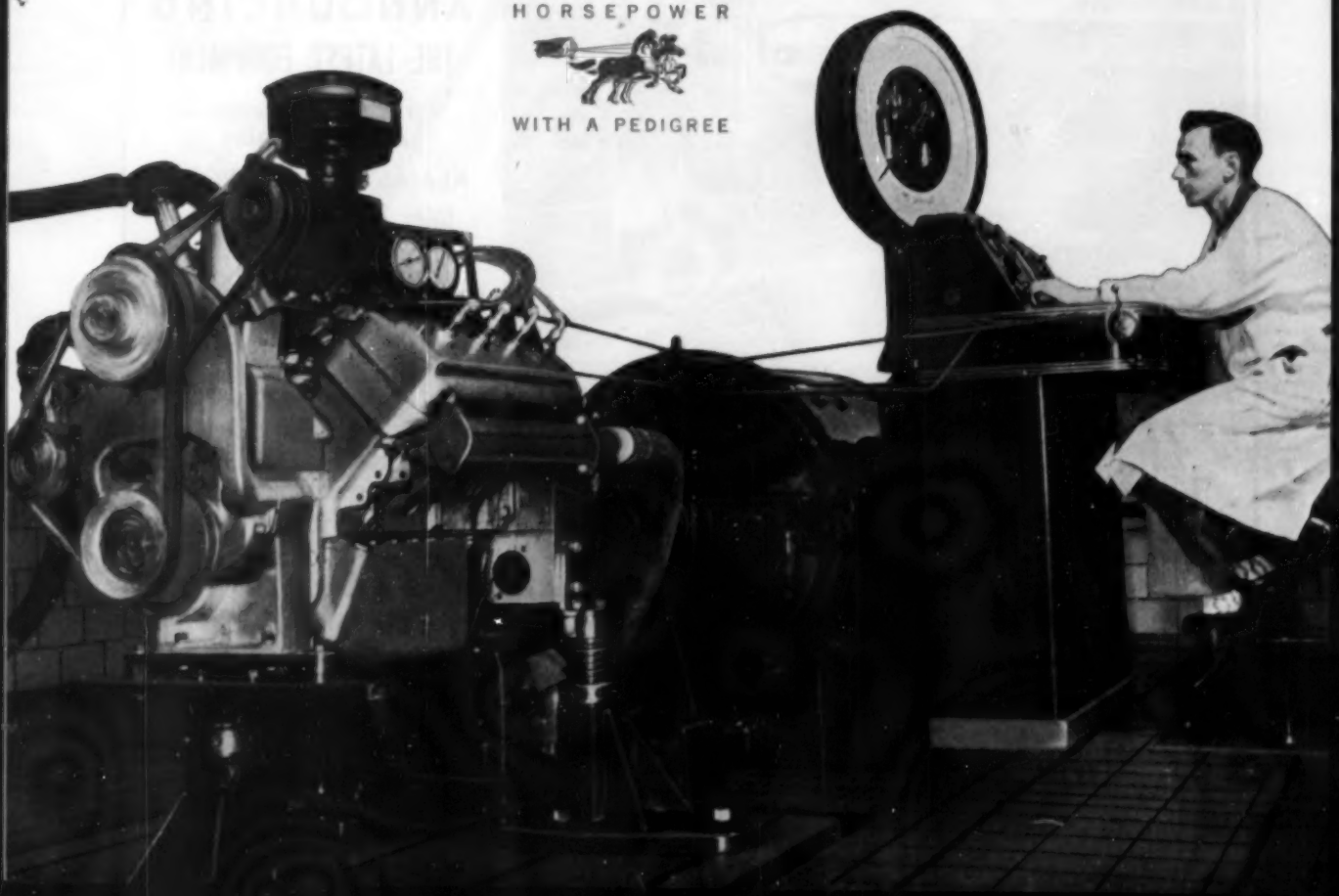
This proves too, beyond a doubt, that the Chrysler Industrial V8 hemispherical combustion chamber design with its short-stroke, low-friction construction, makes an ideal power plant for any equipment that requires continuous high speed operation. Furthermore, in installing a Chrysler V8 Engine in preference to a diesel engine of similar horsepower, you can reduce your size estimate by one-half, your weight by two-thirds, and your cost factor by three-quarters!

For detailed information on the Model 24A or any Chrysler Industrial Engine, see a Chrysler Industrial Engine Dealer, or write: ***Dept. 188, Industrial Engine Division, Chrysler Corporation, Trenton, Michigan.***

CHRYSLER *Industrial Engines*

INDUSTRIAL ENGINE DIVISION • CHRYSLER CORPORATION

HORSEPOWER WITH A PEDIGREE



Tall Timber . . . . . .

The Lumberman presents

Ali J. Sandoz

How to become manager of a couple hundred thousand acres of timberland can hardly be reduced to formulae. But apparently experience gained in administering other agricultural land affairs has its advantages. So does widely ranging forestry and forest industry experience such as cruising, scaling, mapping, locating lines; serving as timekeeper, purchasing agent, paymaster, shipping agent and varied office work.

These varied experiences, backed by sound educational background and a conscientious internal drive, have paid off for Ali J. Sandoz, manager of The Long-Bell Co.'s Northwest Timber Department. Although not necessarily recognized as a prerequisite to qualification for this position, he mastered spinfishing techniques that have been reported as "steelhead stoppers".

Ali's aptitude for "getting at the bottom of things" probably had considerable influence on his angling and other varied accomplishments.

He joined the Long-Bell organization at Longview, Wash. in 1946 as assistant forester, a job largely given over to field work—on timber surveys, cruising, tree farm activities and fire protection, including opening up grades which have since been converted into 300 miles of the company's fire roads. In 1948, with title of forester, he took charge of the Long-Bell forestry department. A year later his title changed to chief forester, which more appropriately fits the professional duties and responsibilities.

ALI J. SANDOZ, manager of Northwest Timber Dept., The Long-Bell Lbr. Co., Longview, Wash. At left, Ali is shown practicing his spinfishing techniques.

Coincident with retirement of Vice Pres. Roy F. Morse last year, Sandoz assumed management of Long-Bell's timber holdings in Washington and Oregon which stretch intermittently south from Ryderwood nearly to Coos Bay. In this position he has charge of engineering, cruising and forestry, including timber buying.

Became All-State Athlete

Ali was born at Trail, Ore., along with twin brother Fred (now land manager of Booth-Kelly Lumber Co.), of immigrant Swiss parents during that period when only Europeans were involved in World War I. His father, Paul, had homesteaded in western Nebraska, along with a brother—about whom the book "Old Jules" was written—before moving to the Pacific Coast states. Ali, his five brothers and one sister, lived as youngsters on a timbered ranch where the family raised cattle.

As a high school student he distinguished himself in sportsmanship and athletics, becoming, among other things, the first person from his school to be named to Oregon's all-state basketball team.

Subsequently he majored in forest management at Oregon State College School of Forestry, there acquiring membership in national forestry honorary Xi Sigma Pi and finishing in 1940 with a B.S. degree. He had worked his way through school by various and sundry jobs, chiefly on the national forests, and consequently early developed background pertinent to his chosen professional field.

Work experience after college took on even more variation, ranging from running hand compass, pacing, mapping and locating section line and corners to cruising timber and fighting fires for USFS. After that the move was into private industry, working at a mill—tallying, loading cars, tieing, trimming, stacking, and unstacking lumber, filling orders and selling. Later he got into other industry jobs such as log scaling, making up mill and camp payrolls; laying out truck roads, logging settings and fallers' strips in addition to more cruising.

Following this varied activity Ali left the forest products field temporarily

(Continued on Page 41)

Write for names of important sawmill users—and Complete Data

KLAMATH IRON WORKS

P.O. BOX 129 PHONE 7721

KLAMATH FALLS, OREGON

DESIGNERS AND MANUFACTURERS OF STANDARD AND SPECIAL SAWMILL MACHINERY

Representatives: Star Machinery Co., Seattle, Wash.
United States Machinery Co., New York, N.Y.
Washington Machinery & Supply, Spokane, Wash.
Electric Power Equipment Ltd., Vancouver, B.C.

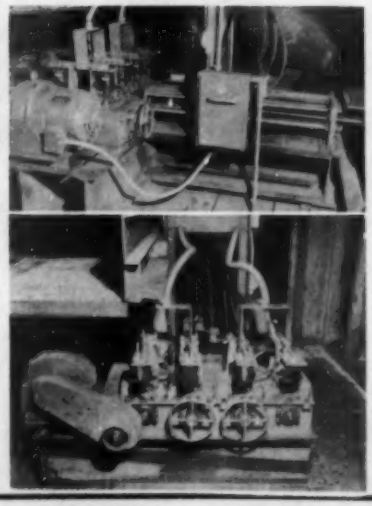
ANNOUNCING

THE LATEST EQUIPMENT

For high production—accurate edging.

KLAMATH IRON WORKS

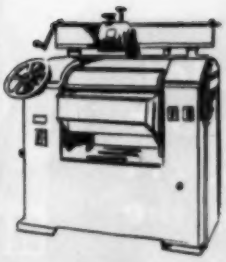
Britt Electric Edger Saw Shifter

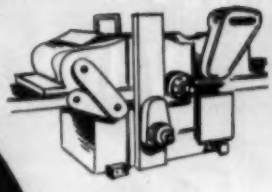


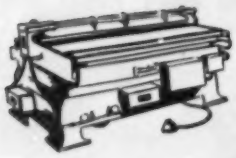
B&B

TRADE MARK

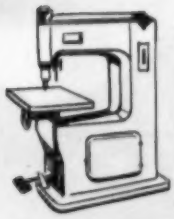
REGISTERED

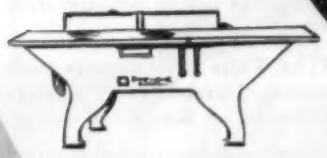


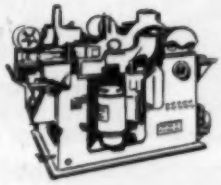




IT'S THE CUTTING EDGE THAT COUNTS







No planer, shaper, jointer or other woodworking equipment can be more efficient than the knives installed on it. That's why, for more than half a century, leading mills and plants have relied on B&B for machine knives of the highest quality — knives that will give ideal performance on their equipment, on their materials, under their conditions. B&B machine knives are precision ground from the finest steels and carefully hardened to produce the keen tough cutting edges that mean extra-long service under the most punishing conditions. B&B knives will speed your production (and cut your costs) by permitting greater speeds and faster feeds, by reducing down-time required for knife changes and grinding.

When you buy machine knives, buy the best:

FINE KNIVES FROM B&B

- Planer knives
- Cutter Head knives
- Beading knives
- Moulding knives
- Cope cutters
- Siding knives
- Flat Tenon machine knives
- Jointer bits
- Jointer knives
- Matcher bits
- Woodworking knives

BAILEY & BLENDINGER CO.

Union, New Hampshire

For all kinds of bodies, hauling all kinds of lumber and building supplies . . . There's nothing like the

WHITE 3000

THE NEW STANDARD of delivery in the construction and building supply industries is the White 3000 . . . in every way the right truck for more deliveries in less time, at lower cost.

Typical of many types of service made more efficient by the White 3000 are these trucks now operating for leaders in the industry, from coast to coast.

DUMP BODIES—The White 3000 permits more payload, improves maneuverability and reduces delivery time because of its functional design.

STAKE BODIES—Lumber deliveries are handled in less time because of the White 3000 design, engineered to special applications.

SPECIAL LOADS—Where there are special requirements, bulky loads or materials handling problems, call on the White 3000 for more efficient handling . . . time savings.

FIXTURE BODIES—Tailored to individual needs, the White 3000 saves space, permits bigger loads with shorter overall length, improves maneuverability and affords new driving ease in traffic and congested areas.

CLOSED BODIES—For plywood, lumber and supplies requiring closed bodies, the White 3000 is ideal for city and suburban delivery, mill trips and special services.

For your own requirements, find out from your White Representative how the White 3000 saves first day in service . . . and for years.

THE WHITE MOTOR COMPANY

Cleveland 1, Ohio

FOR MORE THAN 50 YEARS THE GREATEST NAME IN TRUCKS

ANOTHER *first* FOR GERLINGER

Torque Converter now available on All GERLINGER *Long Wheelbase* FORK LIFT TRUCKS

(Capacities: 12,000, 15,000, 16,000, 18,000, 20,000 and 22,000 lbs.)

WHAT MAKES THE NEW TORQUE CONVERTER DRIVE on GERLINGER

THE HOTTEST NEWS IN THE HEAVY-DUTY FIELD?

HERE'S WHAT TORQUE CONVERTER DOES FOR YOUR GERLINGER FORK LIFT TRUCK!

1. **Reduces clutch wear to absolute minimum.**
2. **Maximum power and torque available for starting without slipping the clutch.**
3. **Uniform power flow protects entire drive system ...saves wear-and-tear on tires.**
4. **No stalling on grades or lugging of engine at low speeds.**

WHAT PERFORMANCE! Here they are! Versatile, rugged Gerlinger Fork Lift Trucks... the undisputed leader for brute strength, especially over rough or muddy terrain ... *now available with Torque Converter for increased performance and new advantages!*

WHAT SAVINGS! The universally accepted hydraulic Torque Converter Drive will pay for itself in reduced maintenance due to smooth acceleration and cushioned engine operation.

WHAT POWER! Automatically combining speed and pull, the Torque Converter puts a new dimension to P-O-W-E-R in the fork lift truck that's recognized as a powerhouse in the heavy material handling field!

WITH OPTIONAL TORQUE CONVERTER DRIVE OR STANDARD TRANSMISSION ... GERLINGER OUTMANEUVERS, OUTLASTS ANY COMPARABLE FORK LIFT TRUCK. *Let us prove it!*

GERLINGER PRODUCTS

G-403

GERLINGER CARRIER CO. • DEPT. TC, DALLAS, OREGON

Please send Gerlinger Fork Lift Truck catalog. No obligation.

Name_____

Firm_____

Street_____

City_____ Zone____ State_____

From WOODS AND MILLS

Ironside Pine Lumber Co. has constructed a 50 to 60M per day electric sawmill at Ironside, Ore. on a site previously occupied by the **Grabner Lumber Co.** sawmill which was destroyed by fire.

A history of Oregon log brands and the stories behind some of the early, unusual marks is being written by **Warren B. "Casey" Randall,** assistant professor of forest management, **Oregon State College.** More than 5100 brands have been filed with the public utility commissioner since the state brand registration. act of 1943.

Plum Creek Logging Co., Columbia Falls, Mont., is currently undergoing a large expansion program. Included are a planer installation, cooling shed, and a dry storage shed. The firm employs 110 men and is the town's biggest payroll.

Sole owner of the **Van sawmill,** Burns, Ore., is **Everett Twinham,** who recently bought out his partner, G. E. Frost.

Thompson Lumber Co.'s sawmill at Bonner's Ferry, Ida., recently burned, with damages estimated at $15,000. It burned so rapidly that eye-witnesses said it seemed to explode.

A new company has been formed to operate a remanufacturing plant near Roseburg, Ore. It is called **Consolidated Milling Corp.** It has lease-purchased the old **Douglas Mfg. Co.** mill. The three owners forming Consolidated are **Holm Bros.,** Glide; **Cleveland Lbr. Co.,** Camas Valley; and **Lloyd Gilbert Lbr.** Co. on Susan creek.

Miller Mill & Mfg. Co., Joseph, Ore., is building a new dry kiln and will have double the drying capacity.

There are now several new faces at **Umpqua Plywood Corp.,** Myrtle Creek, Ore., viz., **Harry Fromong,** assistant to general manager **J. D. McCann; Harold Buckner,** plywood supt.; **Lloyd Meyer,** purchasing agent; and **Harry Slack,** new chief accountant.

Another new mill: **Short Bell Mill** in upper Glenwood valley above Bingen, Wash. Owners are **Jolly Sprague** and **Les Lloyd; Jim Wagner** is headsawyer. Production will be about 20 M daily.

Logging techniques are due for a thorough scientific study as part of the work to be performed by **Crown Zellerbach Corp.'s** new central research laboratory, which is being built at Camas, Wash. Occupancy is set for April, 1955.

Studs will be produced at a new mill on Highway 99 north of Drain, Ore. A company has been formed called **Sterling Studs, Inc.,** and production will be between 50 and 00 M bf per day.

Thompson Falls (Mont.) Lbr. Co. recently held open house for the local townspeople. Visitors saw the new three-unit sawmill in operation and inspected other facilities.

Cascade Locks Lumber Co. and **Home Valley Lumber Co.,** Stevenson, Wash., last month bid successfully on beetle-killed timber near Mt. Adams. Cascade paid $37,500 for two million bf, while Home Valley bought 720 M for $8400.

Bob Korn of Shasta Box Co. is the new vice-gerund snark of Shasta-Cascade **Hoo-Hoo** club. New president of the North Idaho Chapter is **L. R. Pugh,** general manager of the **St. Maries Lumber Co.**

Diamond Match Co., Coeur d'Alene, Ida., seeks to buy 75 million bf of state timber valued at $1¼ million in northern Clearwater county.

James Simpson, office manager of **Arcata Lumber Services, Inc.,** died this spring at Eureka, Calif. He was 35.

The **Wagner-Binford** mill near Cottage Grove, Ore., has been leased by **Ralph Peck.** He was formerly superintendent at **Creswell (Ore.) Lumber Co.**

"New Look" log cabins are now to be pre-fabricated at Santa Rosa, Calif., by **National Log Structures, Inc.,** of Aumsville, Ore. Owners are **Herbert J. Jensen** and **Carl Norman.** Another new plant to be built there is the **Ralph Kappler Lumber Corp.,** of Mulino, Ore. It will be a remanufacturing and planing mill.

Four brothers are new owners of the **Ray Nowlin** sawmill near Gold Beach, Ore. They are **Louis, Lloyd, Ralph and Edgar Hendrix.** Lloyd continues operation of a mill at Alsea.

Biles-Coleman Lumber Co., Omak, Wash. and **Twisp-Wagner Lumber Co.** of Twisp, are seeking return of several thousands of dollars in taxes paid under protest. The tax was paid on standing timber owned by the government on which the firms had cutting rights but no ownership of the actual stumpage.

$20,000 fire damage was sustained by **Sorensen Bros.** mill at Puyallup, Wash., recently. Firemen saved the adjacent planing mill.

Biles-Coleman Lumber Co. at Omak, Wash., recently moved into a handsome new office building which replaces the old original headquarters.

Two new stud mills are going in at Troy, Mont., to saw up beetle-killed timber. One is for **J. Neils Lbr. Co.,** the other for **Rubier Bros.**

Godsey Lumber Co. is the name of the Salem division remanufacturing plant of the parent company at Dallas, Ore., owned by **Mr. and Mrs. Earl Godsey.** It is being leased from **Geo. E. Miller Co.,** Portland, and was formerly known as the **Coast Range Timber Products Co.**

A new firm E. J. Munson & Company have established a shake, lath and moulding mill one mile west of Sheridan, Ore.

Powder River Lumber Co., Inc., Baker, Ore. incorporated in April with capitalization listed as $30,000. Incorporators are Vernon C. Bauge, Lloyd Hudspeth and Burt Willeford.

Solar Lumber Corp., Medford, Ore., was incorporated in April by A. A. Lausmann, Jerry S. Lausmann and S. V. McQueen.

Finishing touches have been put on **Crown Zellerbach Corp.'s** new overhead unloading crane on the New Era, Ore., log dump south of Oregon City on the Willamette river.

St. Joe Paper Co., Port St. Joe, Florida, is planting 3,000 acres of Monterey pine on State Route 20 in Liberty county. The company planted 300 acres last year. The land has been occupied with valueless scrub oak on sandy ridges. The land was cleared and put into condition at a cost of $35.00 per acre. Hand planting at 7x7 foot spacing is used. In Australia under similar conditions the Monterey pine produced double that of the southern slash pine.

Anderson & Middleton Logging Co., Aberdeen, Wash., was high bidder for 1,000,000 feet of salvage timber in the Donkey creek area of the Olympic National Forest. The company's bid was $1,205.

The Decker shingle mill, Elma, Wasn., which burned last August has been rebuilt and is again in operation. The company plans to add a shake machine.

The Alex Zack shake mill at Moclips, Wash., recently burned.

Home Valley Lumber Co., headed by Rees Stevenson, co-owner and manager, is constructing a 40M per day sawmill at Home Valley, Wash. This double-circular mill, which will include a band resaw, is expected to start operating late this summer.

Anlauf Lumber Co., Eugene, Ore., has been incorporated by J. P. McGinty, G. J. Johnson and F. E. Riggs.

Sawmill Fires

The Igo sawmill, 925 South Street, Redding, Calif., was recently swept by fire. The damage was estimated at about $75,000. Jim Neese was the owner of this mill.

The H & B Sawmill, east of Cottonwood, Calif., burned. Loss was estimated at $120,000.

Pack River Lumber Company "Saves the Day" in Crisis

When the Kootenai River in northern Idaho flooded and broke 60-year records recently, a large area was kept from isolation through the efforts of **Pack River Lumber Co.,** Sandpoint, which had previously started work on improvement of a county road near the Kootenai for log hauling purposes. The work was financed by the firm, except for F.S. culverts.

When the flood situation became critical, the company sent men and equipment to build low sections of the road higher than the rising waters. During a four-day nip and tuck battle with the river, Woods Supt. **Curt McEwan** had three bulldozers, a patrol, a dump truck and a shovel constantly at work. In addition Pack River had three men from its cruising department and two logging foremen on the job.

After dikes broke to flood one drainage district, the road became the only means of access to a large farming area south of Copeland and was also used by Army Engineers and other units sent to help the beleaguered valley.

LOGGING THE HIGH AND ROUGH

By Stewart Holbrook

Henry Hansen came to Seattle from Norway when he was sixteen and began a career in the Northwest woods. In the years that followed he has bossed a lot of logging in country that is both high and rough. Today he's in charge of the woods for the Sauk River Lumber Company at Skykomish.

When I first met him some twenty-five years ago, Henry Hansen was boss at the Hamma Hamma Logging Company on Hood Canal. Or, perhaps I should say *up* from Hood Canal. The Hamma Hamma camp was more than 2,500 feet higher than the log dump, 12 miles away, and the fallers and buckers were 500 feet above the camp.

It was high, rough logging, so steep that an incline of counterbalance cars was used to get the logs down to the boom, until Henry laid a railroad that had 9 per cent grades between the camp and the canal. That was pretty steep, too.

But Norway, where Henry Hansen was born, was also steep country. He came to Seattle when he was sixteen, and promptly got a job on comparatively level ground at Sherwood, where he drove a line-horse, which was the method of returning rigging to the woods before the haulback came in. He learned to set chokers under Bill Kerns, a noted Weyerhaeuser boss, and got his first hooktender's job with an outfit at Buckley.

In 1911 Hansen took off for British Columbia and the International Timber Company on Vancouver Island. Two years later he returned to Washington and his first foreman's job, running camp for B. R. Lewis at Clear Lake in Skagit County. This was followed by a camp at Kerriston; then contract logging on Crocker Lake; and a camp of the Cherry Valley Logging Company. In 1925 Hansen went to Hamma Hamma.

I thought then, and think now, that I never saw rougher, steeper logging than near the headwaters of the brawling Hamma Hamma River. It was all straight up, or straight down; and the rumor got around that only men with one leg shorter than the other could stand up and hook a choker to a log on this show. Henry Hansen didn't mind it much. Anyhow, he stayed until the last tree was cut, in 1932.

Then he came down the mountain and went to Vail for Weyerhaeuser, where he worked eight years, quitting only to take charge of the woods for the Sauk River Lumber Company at Darrington.

Darrington terrain, as Darrington loggers were known to remark, was no tennis court. But I doubt that Hansen even noticed the countless humps and sheer ravines. He stayed until logging was finished, then moved to Skykomish, where he has charge of the same company's operations in these craggy foothills. You will have an idea if you know that Skykomish is only a few miles from a Great Northern depot significantly named *Alpine*. . . Superintendent Hansen is still on rough grounds.

There is, however, nothing rough about Hansen. He is of medium build and size, a man of calm eyes, soft voice, and even temper who looks just the way a first-class logging boss ought to look.

Bethlehem Pacific turns out a variety of steel for the logging industry in the West. Bolts, nuts, spikes, special fasteners. Bars, channels, angles, beams, plates, wire. These are produced in modern plants at Seattle, South San Francisco, Los Angeles.

In addition, Bethlehem Pacific supplies steel specialties such as Bethlehem Wire Rope, alloy and tool steels, fabricated steel, sheets, and forgings. Let our sales staff help you. They're located in Seattle, Spokane, Portland, San Francisco, Los Angeles.

BETHLEHEM PACIFIC COAST STEEL CORPORATION

You've got to try it to prove it!

Take an Oliver Crawler and try it out on your operation. See how these tractors really behave on the job. We can tell you they stay on the job longer, do a bigger and more profitable job, but you've got to try it to prove it!

You have to try air steering to learn the advantages of this effortless, positive control method. And you have to try these tractors on steep grades and sidehills to see the hill-clinging advantage of controlled differential steering...the steering that gives you a two-track grip on the ground at all times, even on turns.

For those heavy clearing, skidding or road-building jobs, pick the powerful Model D, like the one shown here, or the big Oliver "OC-18". Both these crawlers have that extra-high clearance that lets you operate longer in the woods without miring down. And both these tractors have many service and maintenance features that keep your costs down.

See your Oliver Distributor; make arrangements to try an Oliver Crawler on your job site. You'll see the difference!

THE OLIVER CORPORATION

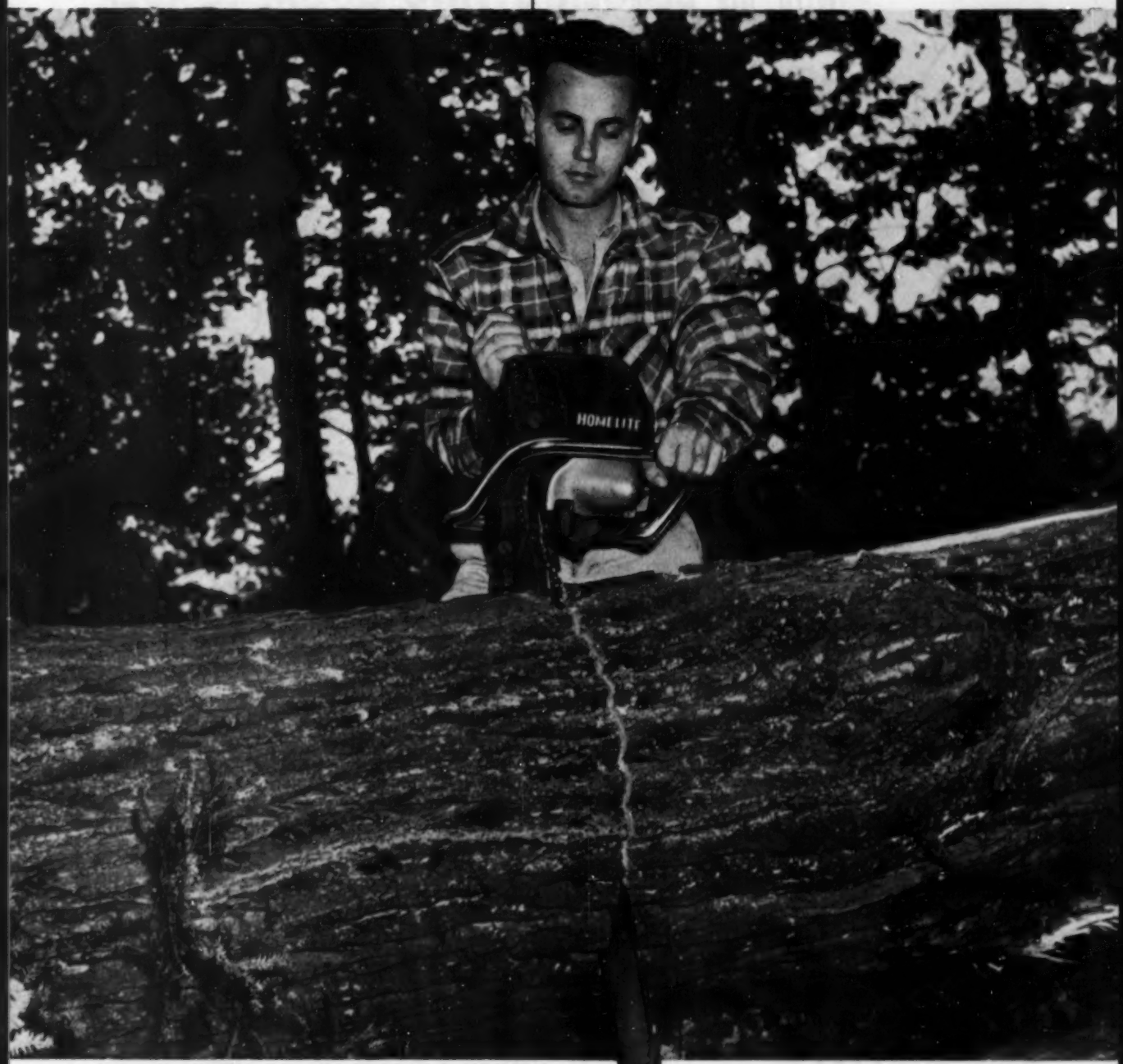
400 West Madison Street, Chicago 6, Illinois

a complete line of industrial wheel and crawler tractors

as low as $259.00

Here's the highest quality saw at the lowest possible price . . . the Homelite Model 17. A real production unit . . . one that will really stand up under heavy duty . . . this lightweight, easy to handle, 22 pounder gives you 3.5 actual dynamometer rated brake horsepower.

It cuts 18 inch trees in as little as 18 seconds. It brings down trees 4 feet or more in diameter and operates without trouble in all angles on any type of cut.



There's a dependable, fast cutting, easy handling Homelite one man chain saw for every type of woodcutting operation. In addition to the Model 17, — the "mighty mite of chain saws", — there's the "king of them all", the 30 pound Homelite Model 5-30 with 5.5 brake horsepower, the most powerful one man chain saws ever built. Both models are available with a wide range of straight blades plus 14″ and 18″ plunge cut bows. Write for complete information.

PERFORMANCE · DEPENDABILITY · SERVICE

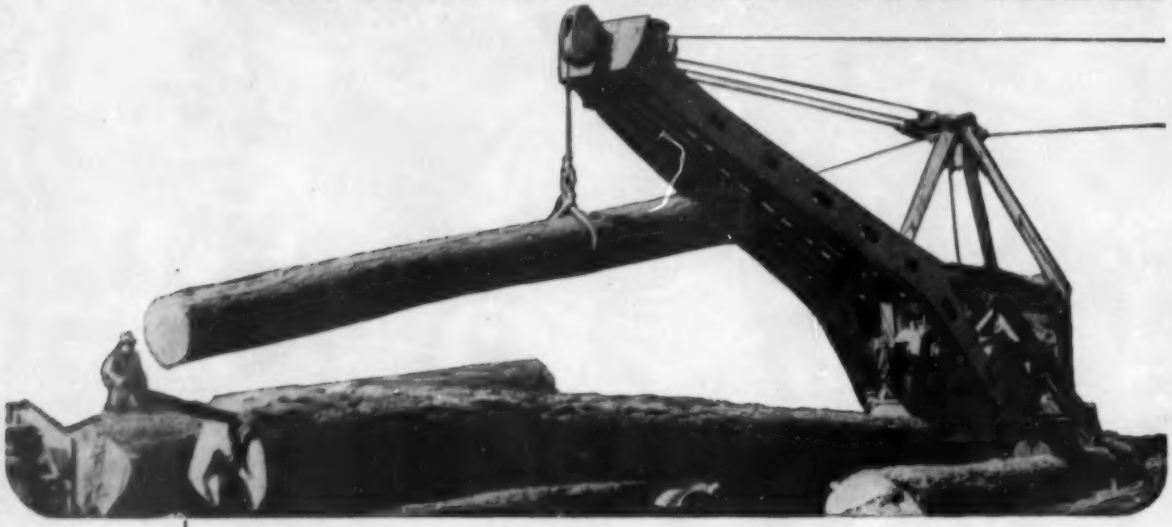
HOMELITE

CORPORATION

4808 RIVERDALE AVENUE • PORT CHESTER, N. Y.

Canadian Distributors: Terry Machinery Co., Ltd., Toronto, Montreal, Vancouver, Ottawa.

Dan Haight loads an average of
400,000 BOARD FEET A DAY
with his BERGER SWING BOOM LOADER



An average of 50,000 board feet per hour—400,000 A DAY!—that's how Dan Haight, Smith River, California, is handling logs from water to trucks with his Berger Swing Boom Loader. On one 14-hour stretech it loaded 700,000 board feet . . . No wonder Dan feels that this loader answers today's 4 logging "musts": (1) Faster, yet cheaper loading, (2) greater mobility, (3) versatility of mounting, and (4) a minimum of rigging for a maximum of stability. . . All at a first investment that's genuinely reasonable. Write for literature.

Klamath Reload is another operator on the Klamath River whose Berger Swing Boom Loader matches Dan Haight's in performance, economy and extraordinary stability.

Berger

Loaders . . Yarders . . Fairleaders . . Blocks . . Air Tongs . . Bridge Cranes . . Loading Booms

Tops in Performance — Tops in Lasting Values

BERGER ENGINEERING COMPANY

3236 SIXTEENTH AVENUE S.W. · SEATTLE 4, WASHINGTON, U.S.A.

What's In A Name?

YOUR standards of quality are wrapped up in your trademark or grade mark

YOUR customers' assurance of quality is guaranteed at the point of purchase

when

YOUR NAME

...appears on Your Lumber!

YOUR NAME embraces your methods of doing business, customer service, quality of manufacture, integrity and prestige.

These Mills are using their names to SELL for the Future with Irvington End Printers Today!

A. DeWEESE LUMBER CO., INC.
Philadelphia, Mississippi

KELSON LUMBER CO.
Bonners Ferry, Idaho

PLUM CREEK LOGGING CO.
Columbia Falls, Montana

FROST LUMBER INDUSTRIES
Huttig, Arkansas

SOUTH COAST MILLING CO.
Brookings, Oregon

KOGAP LUMBER CO.
Medford, Oregon

HAMMOND LUMBER CO.
Samoa, California

WEYERHAEUSER TIMBER CO.
Longview and Everett, Washington

SAVONA TIMBER CO. LTD.
Savona, British Columbia

BOOTH-KELLY LUMBER CO.
Springfield, Oregon

YOUNGS BAY LUMBER CO.
Roseburg, Oregon

WINTON LUMBER CO.
Martel, California

D. L. FAIR LUMBER CO.
Louisville, Mississippi

LAMFORD LUMBER CO.
Mount Vernon, Oregon

WHITE SWAN LUMBER CO.
White Swan, Washington

DIAMOND MATCH CO.
Albeni Falls, Idaho

DIAMOND MATCH CO.
Superior, Montana

HAENER PLANING CO.
Orangeville, Idaho

CROSSETT LUMBER CO.
Crossett, Arkansas

SANTIAM LUMBER CO.
Lebanon, Oregon

OZAN LUMBER CO.
Prescott, Arkansas

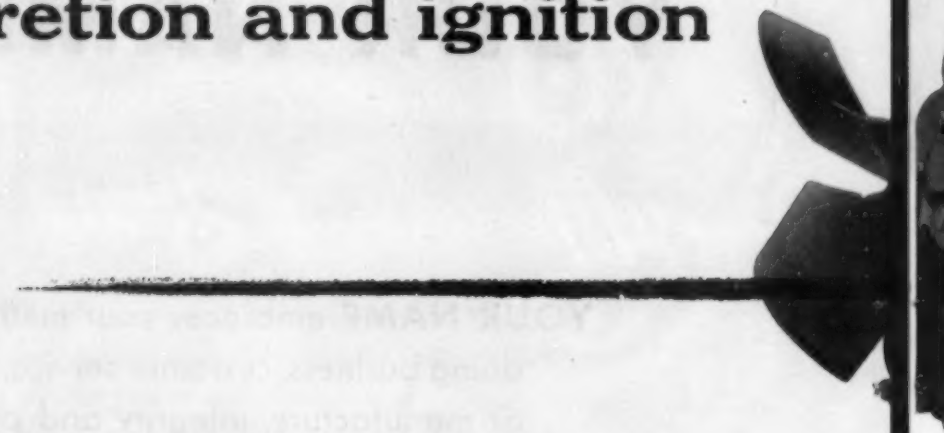
Write for details. Learn how easily YOUR NAME (we'll send you a rough sketch) can carry your assurance of quality to your customers. We'll also include "The Story of End Printing".

Irvington
MACHINE WORKS

1608 N. E. 7th AVENUE • PORTLAND 12, OREGON
3 COLFAX N.E. • GRAND RAPIDS 5, MICHIGAN

Announcing...

revolutionary new diesel fuel system... as simple as gasoline carburetion and ignition



Exclusive PT Fuel System now standard on all Cummins Diesels

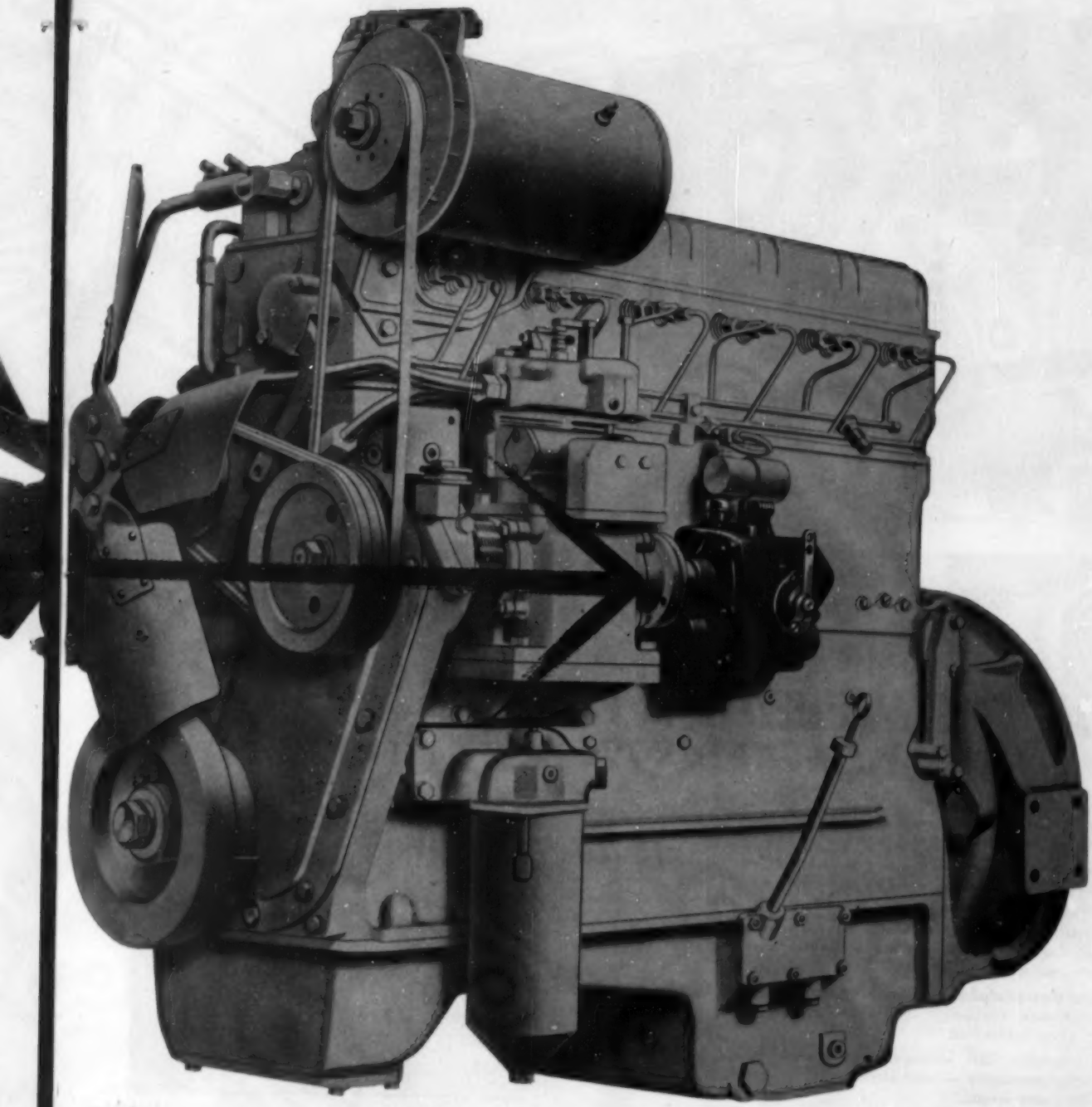
- Drastically reduces maintenance costs
- All mechanics can understand and service it
- Pump weighs only 13 pounds—system has no racks, check valves, metering plungers, discs, floats, etc.— does not have to be timed to engine
- Adaptable to all Cummins Diesels built since 1932

Write for your copy of descriptive folder "Cummins PT Fuel System."

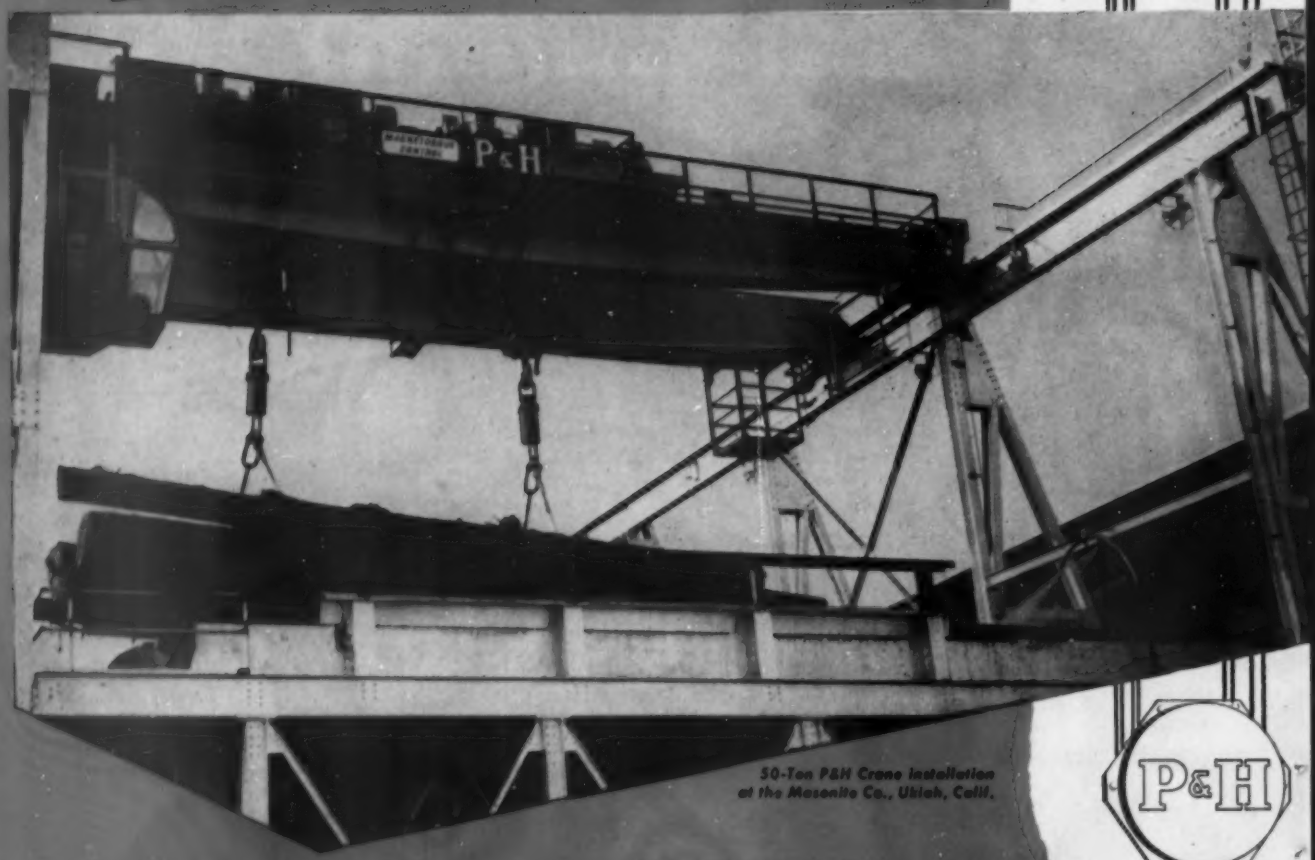
CUMMINS **Cummins**

Engine Company, Inc., Columbus, Indiana

Leader in rugged, lightweight, high-speed diesels (60-600 h.p.)



P&H OVERHEAD CRANES



50-Ton P&H Crane Installation at the Masonite Co., Ukiah, Calif.

JOB ENGINEERED for Wood Products with P&H MAGNETORQUE* AC CRANE CONTROL

Here's smoother, faster, more dependable handling for the lumber industry — thanks to P&H Magnetorque* Crane Control.

Smoother! — Magnetorque provides the finest speed-load characteristics known — even, accurate performance with better control, less damage to lumber, and all the convenience and economy of AC power!

Faster! — with higher bridge speeds! You can decelerate faster, without jerks and jars. This means swifter handling, more board feet handled per hour.

More dependable! Because Magnetorque completely eliminates old-fashioned mechanical brakes and all their maintenance problems. There's less "down time."

And remember, P&H, America's leading crane builder assumes complete service responsibility — with electrical equipment *built . . . not borrowed . . .* for crane service.

P&H Lumber-handling crane in the Booth-Kelly Lumber Co., Springfield, Ore.

P&H PACIFIC DIVISION

HARNISCHFEGER CORPORATION

Plant, District Office and Warehouse — 2400 East Imperial Highway, Los Angeles 59
San Francisco — 100 Bush Street Seattle — 2909 First Avenue, South
Denver — Central Bank Building, 1160 15th Street

The best service for the West

P&H's Western Manufacturing plant parts depot and service organization are here to serve you better in every detail. We invite you to visit us and inspect P&H facilities.

*TM of Harnischfeger Corporation for electro-magnetic type brake.

CRESCENT CITY, CALIF. Riley Logging Supply Co. Highway "Y" • EUREKA, CALIF. Riley Logging Supply Co. 1034 Broadway Street • LOS ANGELES 22, CALIF. Shaw Sales & Service Company, 5100 Telegraph Road • OAKLAND 6, CALIF. Cook Bros. Equipment Co. 416 East Eighth St. • SACRAMENTO, CALIF. Sacramento Valley Tractor Co. 1901 Broadway • SALINAS, CALIF. Farmers Mercantile Company, 15 W. Alisal Street • EUGENE, OREGON, Loggers & Contractors Machinery Co. 540 Filmore Street • PORTLAND 14, OREGON, Loggers & Contractors Machinery Co., 240 S.E. Clay St. • SALT LAKE CITY 13, UTAH, Western Machinery Company, 2300 South Main St. • SEATTLE 8, WASH. Bow Lake Equipment Co., Inc. 300 Michigan Street • SEATTLE 4, WASH. Glenn Carrington & Company, 91 Columbia Street (For Alaska) • SPOKANE 1, WASH. Construction Equipment Company, E. 3823 Trent Ave. • FRESNO, CALIF. Allied Equipment Co. 1824 Santa Clara.

"I was promised delivery today,

but now I'm told you've no stock of one rope and only half enough of another. This delay is costing me money and plenty of it. From now on it's Roebling for me!"

* * *

You can count on prompt and full delivery of Roebling wire rope. Your nearest Roebling office and distributor will help you choose the rope that will perform and stand up best in logging service. And you'll get what you want, when you want it —straight from nearby warehouse stock.

ROEBLING (CF)

Subsidiary of The Colorado Fuel and Iron Corporation

JOHN A. ROEBLING'S SONS CORPORATION, TRENTON 2, N. J.

BRANCHES: ATLANTA, 934 AVON AVE. • BOSTON, 51 SLEEPER ST. • CHICAGO, 5525 W. ROOSEVELT RD. • CINCINNATI, 3253 FREDONIA AVE. • CLEVELAND, 19235 LAKEWOOD HEIGHTS BLVD. • DENVER, 4801 JACKSON ST. • DETROIT, 915 FISHER BLDG. • HOUSTON, 6216 NAVIGATION BLVD. • LOS ANGELES, 5340 E. HARBOR ST. • NEW YORK, 19 RECTOR ST. • ODESSA, TEXAS, 1930 E. 2ND ST. • PHILADELPHIA, 230 VINE ST. • SAN FRANCISCO, 1740 17TH ST. • SEATTLE, 900 1ST AVE. S. • TULSA, 321 N. CHEYENNE ST. • EXPORT SALES OFFICE, TRENTON 2, N. J.

INTERNATIONAL Model RDF-320. Diesel-powered. Also available with gasoline or LPG fuel system. Famous Comfo-Vision cab.

PROFITS ON THE WAY UP!

Profits go up and costs go down with load-designed INTERNATIONAL Western-built loggers on the job.

Your loads are your profits. Why let operating and maintenance costs cut into them? INTERNATIONAL logging trucks are *specialized* to move the heaviest loads with speed and safety while bringing costs to the ground.

With INTERNATIONAL trucks, you can select the power, the wheelbase, the transmission, the axle ratio that will fit your job exactly.

Every INTERNATIONAL truck has the same Tough-Job engineering that has made INTERNATIONAL the heavy-duty sales leader for 22 straight years.

So let your INTERNATIONAL Dealer or Branch determine the truck that fits your needs exactly. Your trade-in may cover the down payment. Convenient terms arranged.

Best logging trucks on the road

19 Western models for off-highway or highway operation. GVW ratings 30,000 to 90,000 lbs.

The right power at the right operating cost. Choice of gasoline, LPG, or diesel engines, up to 356 hp.

Unusual comfort. Famous Comfo-Vision cab with one-piece Sweepsight windshield, and many other exclusive features, provide maximum driver efficiency.

The right components for top performance. Transmissions, axle ratios, and wheelbases to fit any need.

Service when and where you need it. World's largest exclusive truck service organization. Dealers throughout the West, INTERNATIONAL truck branches at San Diego, Los Angeles, Long Beach, Glendale, Fresno, Sacramento, Oakland, San Francisco, Portland, Spokane, Salt Lake City, Denver, Billings, Great Falls, Seattle, Tacoma, and Phoenix.

INTERNATIONAL HARVESTER COMPANY • CHICAGO

International Harvester Builds McCORMICK® Farm Equipment and FARMALL® Tractors...Motor Trucks...Industrial Power...Refrigerators and Freezers

Better roads mean a better America

INTERNATIONAL TRUCKS

"Standard of the Highway"

TODAY, you can know the true value of your mobile communications *in advance of purchasing!* General Electric defines a clear-cut estimate of its 2-way radio performance with this confident warranty . . . *Selectivity Guaranteed For Life!*

This applies to every new G-E unit . . . *regardless of type!* Remember, the services you perform deserve nothing less than this warranty. Insist on it! Before you buy—compare G-E 2-way radio features . . . compare G-E performance with any other make in the industry. You'll make the wise decision—in favor of G-E! Get the G-E story first by calling our local district representative or writing: *Section X2384, General Electric Company, Electronics Park, Syracuse, New York.*

PROGRESS IS OUR MOST IMPORTANT PRODUCT

GENERAL ELECTRIC

General Electric Company, Section X2384
Electronics Park, Syracuse, New York.

I want to know more about General Electric's *new* GUARANTEE!

NAME .....

COMPANY .....

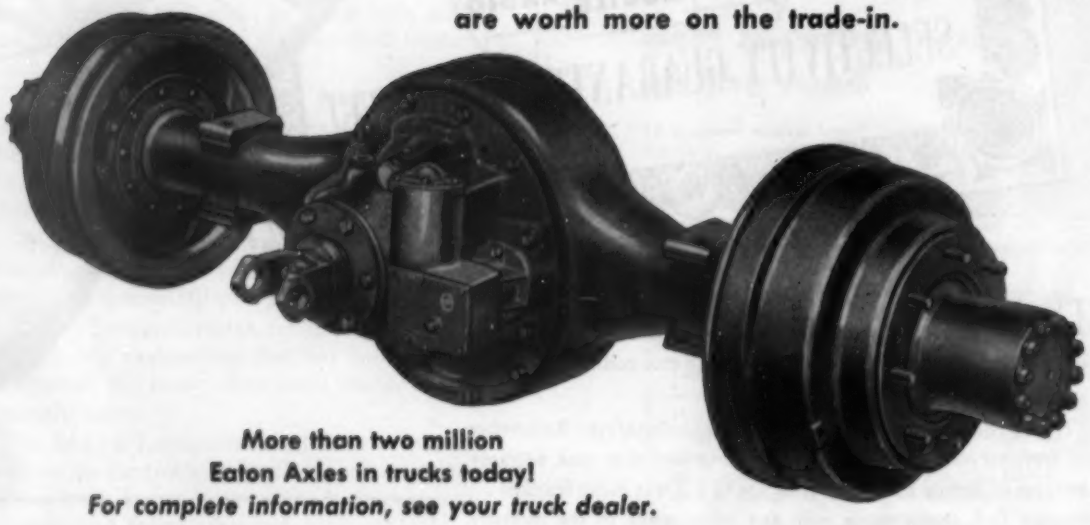
ADDRESS .....

CITY ..... STATE .....

Eaton 2-Speed Axles

SAVE MONEY MAKE MONEY for Truck Operators

Eaton 2-Speed Axle trucks make more and quicker full-load trips—operating cost is lower, upkeep is less. Trucks last longer, earn more, are worth more on the trade-in.



More than two million Eaton Axles in trucks today!
For complete information, see your truck dealer.

EATON — AXLE DIVISION — MANUFACTURING COMPANY
CLEVELAND, OHIO

PRODUCTS: Sodium Cooled, Poppet, and Free Valves * Tappets * Hydraulic Valve Lifters * Valve Seat Inserts * Jet Engine Parts * Rotor Pumps * Motor Truck Axles * Permanent Mold Gray Iron Castings * Heater-Defroster Units * Snap Rings Springtites * Spring Washers * Cold Drawn Steel * Stampings * Leaf and Coil Springs * Dynamatic Drives, Brakes, Dynamometers

National Plywood Association Elects

At the annual meeting of the National Plywood Distributors Association held in June in New York, M. C. Davidson, president, Houston Sash and Door Company, Houston, Texas, was elected President. He succeeds Robert C. Whitmeyer, Vice-Pres. of J. R. Quigley Company, Gloucester, New Jersey.

Other officers elected at the meeting were Leonard E. Hall, President of Products, Inc., Portland, Ore., 1st Vice-Pres. and E. G. Thuresson, President, Associated Door and Plywood Company, Chicago, Illinois, 2nd Vice-Pres. Managing Director, Charles E. Delvin was re-elected Secy.-Treas.

Directors representing regions within the organization, who were installed at the meeting following election at the Spring Regional Meetings of the organization, were as follows: For the southern region, Louis G. Riecke, President, Tulane Hardwood Lumber Company, New Orleans, La.; for the western region, Harold E. Sand, Pres., Charles E. Sand Plywood Company, Portland, Ore.; for the eastern region, Ronald H. Winde, vice-pres., Winde-McCormick Lumber Company, Boston, Mass.; and for the midwest region, Ken Lester, Pres., Ken Lester Plywoods, Inc., Detroit, Mich.

Two newly-created positions on the Board of Directors were also filled at the annual meeting by the election of William H. Hunt, Vice-Pres., U. S. Plywood Corp., for a two year term; and Stewart White, Vice-Pres., Georgia-Pacific, Olympia, for a one year term.

Tall Timber

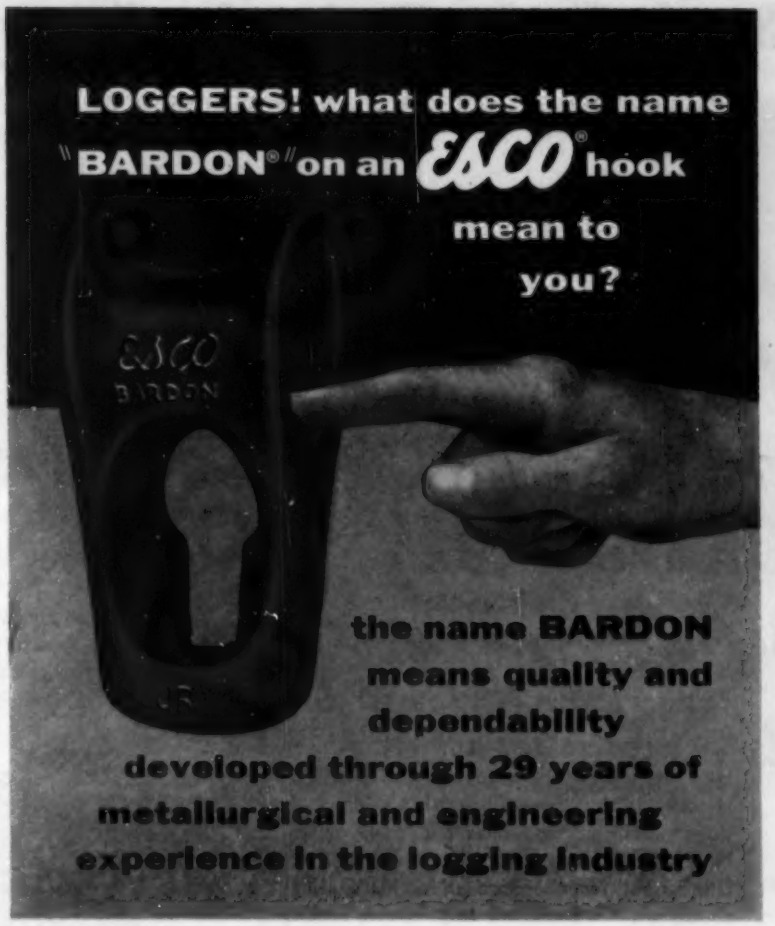
(Continued from Page 24)

to become secretary of an agricultural irrigation district in eastern Oregon, the position necessitating handling tax assessing and collection, keeping minutes of directors' meetings and maintaining complete financial records of the over 500-landowner membership.

Not too long after Ali and Fred finished at the forestry school, they jointly discovered and collected the original specimens of a previously unknown conk, infecting true firs and hemlock, which has since been named **Oxyporus nobilissimus.**

A community and industrially spirited individual, Ali represented his company as a founder of The Abernathy Forest Assn. and has served as president of the organization since its inception; is a trustee of Washington Forest Fire Assn.; belongs to Blue Lodge at Longview, Consistory at Kelso, Afifi Temple of Tacoma, Columbia River Shrine Club and is a member of Society of American Foresters.

In 1950 he married Ann Strother, a former airline counter sales agent. They have a daughter, Joli Ann.


LOGGERS! what does the name "BARDON" on an ESCO hook mean to you?
the name BARDON means quality and dependability developed through 29 years of metallurgical and engineering experience in the logging industry

the name **BARDON** appears only on genuine **ESCO** **cast-manganese hooks**

When you buy a genuine *ESCO* Bardon Hook you are assured of the rugged quality and *dependability* that you have come to expect from all *ESCO* logging rigging. Behind every *ESCO* Bardon Hook stands the full resources of *ESCO* engineers, metallurgists, foundry craftsmen and modern manufacturing facilities plus the accumulated experience developed through a 29-year association with the logging industry.

See your *ESCO* Distributor for the right cast-manganese logging rigging for every job in the woods—and remember...

ELECTRIC STEEL FOUNDRY COMPANY

Manufacturing Plants
2149 N. W. 25th Ave.
Portland 10, Oregon
712 Porter St.
Danville, Illinois

Other Offices and Warehouses
New York City, N. Y.
Los Angeles,
San Francisco,
California
Seattle, Spokane,
Washington
Centralia, Pa.;
Houston, Texas
Medford, Eugene,
Oregon
Salt Lake City, Utah
Honolulu, Hawaii,
In Canada, Vancouver,
British Columbia and
Toronto, Ontario

Look for the BARDON if you want a genuine *ESCO* BARDON HOOK

Here's Grader Design for Greater Output

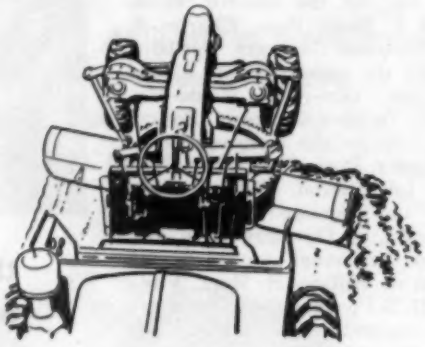
Allis-Chalmers combination of power, strength and dependability in the AD-40 Motor Grader assures faster, better access road maintenance.

1. Full 104 Brake HP gives this modern grader the power and speed to get jobs done, even on steep grades or in safe or rough going.

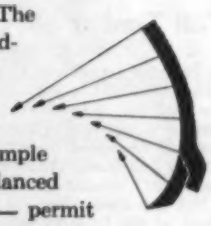
2. Built Rugged for Tough Assignments — Exclusive single-member tubular frame absorbs sudden shocks and the stress of heavy blade loads. Heavy-duty clutch, transmission and final drives also back up big blade capacity. The AD-40 is built throughout for the kind of dependability that counts when working far from service facilities.

3. Hugs the Ground — The AD-40's low center of gravity gives it ground-hugging ability second to none. Plenty of traction and stability help resist side thrust, add to maneuverability.

4. Easy on the Operator — "Pilot house" visibility lets operator see the front wheels and both ends of the blade — sitting or standing. Operator's seat and steering wheel are adjustable, platform is roomy, controls are easily reached. Power steering absorbs the wheel shocks, lets operator work with minimum effort.



5. Rolling-Action Moldboard — The exclusive ROLL-AWAY moldboard keeps load "live" and rolling freely for best use of power. And the A-D-40's higher-arch front axle and ample throat clearance — plus balanced power, weight and traction — permit moving large windrows, bigger loads.



Let us send you complete information about the AD-40 — or your Allis-Chalmers dealer will be glad to give you the complete story.

AD-40

104 brake hp 23,000 lb
6 forward speeds to 20.4 mph 3 reverse speeds to 7.0 mph

ROLL-AWAY is an Allis-Chalmers trademark.

ALLIS·CHALMERS
TRACTOR DIVISION — MILWAUKEE 1, U. S. A.

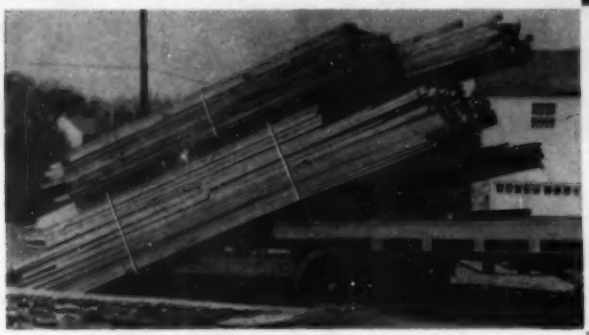
The strap makes the difference . . .

Cuts handling costs in half!

In half did we say? That's a conservative estimate. Actually, you can reduce your lumber handling costs by *75% or more.* Straddle trucks and fork trucks can handle lumber, packaged with USS Gerrard Strapping, in ¼ to ⅕ the time it takes to handle loose lumber. And this savings is realized every time the lumber is loaded or unloaded. Strap it once and it's strapped to stay. Labor costs go down, revenue goes up.

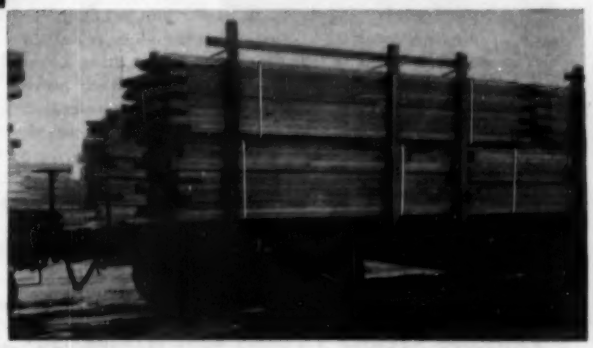
INVENTORY ▸

Once tied with USS Gerrard Strapping and tabulated, packaged lumber needs no further inventorying. Grades, sizes, and varieties can be kept together, and when necessary, can be retabulated with ease. Packaging also prevents pilferage, especially at building sites where lumber theft is very prevalent.



◂ DELIVERY

Packaged lumber can be unloaded faster at its destination. It can be dropped from a truck bed, without the individual boards spilling in all directions—a common procedure that necessitates repiling to save space. Moreover, when your customer receives packaged lumber, he has a chance to reduce *his* handling costs, too. You can be sure he'll thank you for it by giving you future orders, and recommending you to his associates.



You can save on unit costs and freight charges by obtaining both your Round and Flat Steel Strapping from a single source. You'll save on paper work, too, since one purchase order brings you both types of strapping. Better contact a Gerrard Packaging engineer. He'll be glad to show you how you can cut costs while expediting deliveries, by applying the Gerrard Method of Strapping to your operation. His services are free to you. Write to:

Gerrard Steel Strapping Division
United States Steel Corporation
4729 South Richmond Street, Chicago 32, Ill.

USS GERRARD

ROUND STEEL **STRAPPING** FLAT STEEL

USS

UNITED STATES STEEL

New Chevrolet Trucks

deliver more power, more ruggedness, for less money!

Making sure the truck you buy has plenty of power and chassis ruggedness is good business in any man's book. Getting the money-saving extra power and ruggedness of Chevrolet trucks is *better* business in any man's book*keeping.*

EXTRA POWER MEANS BIGGER SAVINGS

No doubt about it, the extra power you get from new high-compression Chevrolet truck engines means you're going to pay out less for gasoline. Over a year, that adds up to a sizeable savings. Increased power brings time-saving benefits, too—greater acceleration and hill-climbing ability . . . you haul faster, get the job done quicker!

GREATER RUGGEDNESS CUTS OPERATING COSTS

Heavier axle shafts and wheel hubs on two-ton models; bigger, more durable clutches on light- and heavy-duty models; stronger, more rigid frames on all models. These features pay off in extra-low upkeep costs . . . extra miles of dependable truck life.

But these *while-you-drive* savings aren't all, by a long shot. You even save *when you buy.* For Chevrolet is America's lowest-priced line of trucks. Stop by your Chevrolet dealer's soon to see the "savingest" trucks on the road. He'll show you models ideally suited to your job, with facts to prove you'll get more for your money. Chevrolet Division of General Motors, Detroit 2, Mich.

CHEVROLET

MOST TRUSTWORTHY TRUCKS ON ANY JOB!

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

THREE GREAT ENGINES—The new "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **NEW TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—improved-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **NEW RIDE CONTROL SEAT***—eliminates backrubbing. **NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give increased load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance.

**Optional at extra cost. Ride Control Seat is available on all cabs of 1½- and 2-ton models, standard cabs only in other models. "Jobmaster 261" engine available on 2-ton models, truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.*

THE RIGHT FILE FOR EVERY SAW

...by the world's foremost file manufacturer

NICHOLSON'S ninety years' study of saws has quite naturally led to ninety years of know-how in making saw files of every needed kind. Quite naturally, then, Nicholson and Black Diamond brands enjoy world-wide acclaim as just about the finest in existence. They have *earned* this merit by their consistently high quality—which embraces: (1) scientifically designed shapes and cuts to fit each individual type of saw and saw teeth; (2) properly formed and evenly high file teeth; (3) uniform hardening throughout each file's cutting length. You'll find these qualities precisely the same no matter how many files you buy at a time—now or a year hence. Examples:.

NICHOLSON SPECIAL CROSSCUT SAW FILE *(right)* for both cutter and raker teeth. Cellophane-wrapped for rust-prevention; orange tang for easy identification.

NICHOLSON ROUND CHAIN SAW FILE No. 84 *(middle)* —most widely used for round-hooded chain saw teeth—has spiral cut with special shearing angle for sharpening and smoothing at the same time. Others: **FLAT** for cutter-and-raker type teeth. **LOZENGE** for simultaneous filing of two cutting edges of square-hooded teeth.

NICHOLSON WEBSAW FILE *(left)* for pulpwood saw teeth of less than 60° angle. (For "M" websaw and crosscut saw teeth, use the **CANTSAW** file.)

NICHOLSON HANDSAW FILES *(not shown)* come in a full range of Tapers (triangular) — Regular, Slim, Extra Slim, Double Extra Slim.

SOLD THROUGH SUPPLY HOUSES

NICHOLSON FILE COMPANY
21 Acorn Street
Providence 1, R. I.
(In Canada: Nicholson File Company of Canada Ltd., Port Hope, Ontario)

From a Nicholson File advertisement in The Saturday Evening Post

NICHOLSON FILES *FOR EVERY PURPOSE*

LIMA Type 44 ANSWERS DEMAND for One yard shovel and 25 ton crane

(AVAILABLE WITH CRAWLER, WHEEL OR TRUCK MOUNTING)

To meet the need for a 25 ton crane and 1 cubic yard shovel, Baldwin-Lima-Hamilton Corporation, is now producing the LIMA Type 44. As a shovel, it is equipped with 20 ft. boom and 15 ft. dipper handle. This latest addition, fills an important spot in the LIMA line, between the famous Paymaster (17½ ton crane—¾ yard shovel) and model 604 (35 ton crane—1½ yard shovel).

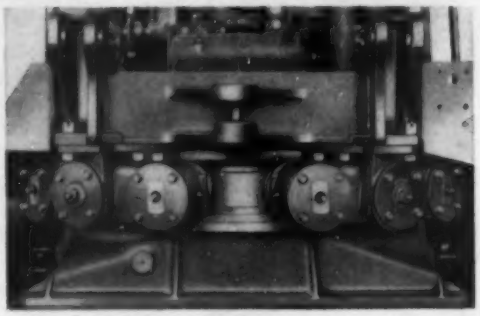
Like its smaller brother, (Paymaster, Type 34), the LIMA Type 44 is available, with either crawler or rubber mountings. Wider, longer crawlers for greater stability and double sets of front cone rollers, to distribute the load more equally over a wider area, are some of the major design features.

For your copy of our Type 44 bulletin, please contact your nearby LIMA distributor, or write to Construction Equipment Division, Baldwin-Lima-Hamilton Corp., Lima, Ohio.

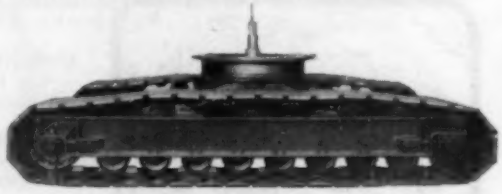
COMPARE!

No other machine gives you as much as LIMA!

1. All gears, smaller parts and shafts which are subject to extra wear, are flame or induction hardened for longer life.
2. Main machinery is placed well back of center of rotation, to eliminate excess counterweight.
3. Anti-friction bearings, used at all important bearing points, reduce destructive friction, fuel consumption and lubrication requirements.
4. Big capacity drums and sheaves, lengthen cable life by reducing the need for double wrapping and sharp bends in cable.
5. Propel and swing gears and power take-off, are enclosed in a sealed oil bath for dirt elimination and smoother, quieter operation.
6. Torque converter (optional), automatically adjusts speed to load requirements, minimizing shock loading, making performance smoother and faster.
7. COMPARE and you'll specify LIMA for shovels, (¾ cu. yd. to 6 cu. yds.), cranes (to 110 tons) and draglines (variable).



The conical rollers are the hook type, four in front and two in the rear. The four front rollers are arranged in pairs and each pair is mounted in an equalizer frame.



An extra long Crawler (15'-0" long, 10'-8" wide), is available for work requiring greater stability.

DISTRIBUTORS

Our Seattle Office
1932 First Avenue South
Seattle, Washington

Cascade Industrial Supply
Highway 99 So.
Redding, California

Feenaughty Machinery Company
112 S.E. Belmont Street
Portland 14, Oregon

Feenaughty Machinery Company
600 Front Street
Boise, Idaho

Modern Machinery Co., Inc.
4973 Third Avenue South
Seattle 4, Washington

Modern Machinery Co., Inc.
4412 Trent Ave.
Spokane 2, Washington

Alaskan Distributor
Western Tractor & Equip. Co.
2230 First Avenue, South
Seattle 4, Washington

Dietrich-Collins Equipment Ltd.
890 S.W. Marine Drive
Vancouver, B. C., Canada

LIMA
SHOVELS • CRANES
DRAGLINES • PULLSHOVELS

BALDWIN BLH LIMA-HAMILTON
Construction Equipment Division

BALDWIN-LIMA-HAMILTON CORPORATION
Construction Equipment Division
LIMA, OHIO, U.S.A.

Hydrotarder..

brings Truck Operating Costs WAY DOWN!

Regardless of the length or steepness of the grade . . . the condition of the road . . . the size of the load or the type of truck you're operating . . . the Parkersburg Hydrotarder brings operating costs way down.

The powerful Parkersburg Hydrotarder holds your trucks to a safe, uniform downgrade speed. It eliminates the downgrade grind on brakes that wears out linings long before their time. It prevents the sudden slowdowns and quick stops that burn up tires. It relieves the transmission and engine of the overload of checking the truck's speed. These savings, alone, cut truck operating costs by thousands of dollars per year.

The safe, dependable control of downgrade speed saves time on downhill travel, gives you more round trips per truck. This added service per truck, plus the savings on operating costs, makes the Hydrotarder an investment that pays for itself many times over.

More than 15 years service have proved the value and performance of the Hydrotarder. Its record for lowering truck operating costs is unequalled or unmatched.

Hydrotarder Available for All Trucks, All Loads

Ask your Hydrotarder distributor listed below for complete details about the right Hydrotarder for your truck. Please furnish the following information: Gross weight of vehicle; percent maximum grade; size and ply of tires on rear wheels; total gear ratio of rear axle; gear ratio in auxiliary transmission (if truck has two transmissions); maximum driving speed desired while descending maximum grade.

No. 5407

PARKERSBURG
HYDROTARDER

Distributed by
HETZEL BROTHERS
ENGINEERS and MANUFACTURERS
1972 Los Angeles St., Los Angeles 11, Calif.

an ACCO product

American Cable Dualoc* Logging Chokers

These Chokers Set Faster Because the Eyes Stay Open

• Suppose it does take only one minute longer to get the twisted, pulled down eye of a hand-spliced choker on the arch line hook. That one minute by itself means nothing. But if it takes one minute longer on each log you bring in each day, figure it out for yourself. Wasted time, and injury to your setters from frayed wires at the splice, may be costing you a pile of money.

You've most likely seen DUALOC Chokers but let us refresh you on their features—

Strength—first of all, DUALOC Chokers are made from the toughest wire and they're furnished with independent wire rope cores for even greater strength and resistance to crushing. They're made of TRU-LAY Preformed Wire Rope.

Safety—The lower DUALOC collar covers the wire ends completely so they can't cut hands or snag clothes. Preforming of the wire rope keeps broken wires from sticking out like dangerous barbs.

Ease of Handling—The DUALOC ending is lighter and more flexible, yet stronger, than a stiff old hand-splice. It keeps the eye from twisting shut. It also rides over the rollers without damaging the splice. The preforming takes the crankiness out of the rope and makes it less likely to kink so they won't snarl up.

Tests in the woods have proved conclusively that DUALOCS set faster, last longer, and cost less to use. See your logging distributor today, or write our Wilkes-Barre, Pa., office for further information on money-saving DUALOC Logging Chokers.

*Trademark

ACCO

American Cable Division

AMERICAN CHAIN & CABLE

Wilkes-Barre, Pa., Atlanta, Chicago, Denver, Houston, Los Angeles, New York, Odessa, Tex., Philadelphia, Pittsburgh, Portland, Ore., San Francisco, Bridgeport, Conn.

plus ACCO Registered Wire Rope Slings

WHAT'S THE BEST SAW FOR YOUR MILL?

Your HOE Distributor can furnish the correct answer, because Hoe makes a full range of WIDE BAND SAWS to meet every requirement for head saw, resaw or rip saw.

No matter how heavy the feed – how fast you cut – maximum footage is no problem with a HOE WIDE BAND SAW. And your Distributor can supply just the right width, gauge, and tooth spacing for your particular work.

HOE BAND SAWS require minimum servicing because they are made of a special steel unsurpassed for toughness, for edge holding, for tension holding . . . and are so expertly ground and finely finished that their thickness is always uniform throughout.

The name "HOE" on a band saw is an assurance of profitable production.

R. HOE & CO., INC.

910 East 138th Street New York 54, N. Y.

Branch Factories and Sales Offices
Birmingham 11, Ala.–2917 Lomb Avenue
Portland 4, Ore.–53 Southwest Oak Street

CHISEL-TOOTH SAWS • BITS AND SHANKS • SOLID SAWS • BAND SAWS • KNIVES • FILES

powered for Performance

26' Bryant-built stock work boat, 25 H.P. Evinrude outboard motor installed in stern well.

BIG TWIN
25 O.B.C. certified B.H.P. at 4,000 R.P.M. Gearshift, separate plug-in fuel tank.

PROVED PERFORMANCE! No "maybe" when it came to picking the power plant for this husky work boat. In identical hulls the Evinrude 25 H.P. Big Twin had conclusively proved its advantages over conventional engine installations of the same rated horsepower. Higher speed, light or loaded. Greater maneuverability. Important space saving. Easy beaching. *Far lower cost*—as much as $900 *less* than the conventional installations.

With *performance,* an Evinrude gives you stamina and low upkeep you couldn't beat in any type of motor. A complete line, 3 to 25 H.P., to meet the widest range of work boat needs. See your Evinrude dealer—look for his name under "Outboard Motors" in the yellow pages of your phone book. For complete literature write EVINRUDE MOTORS, 4479 North 27th Street, Milwaukee 16, Wisconsin.

In Canada: Manufactured by Evinrude Motors, Peterborough, Ontario

Big Twin is also available in 20" extra depth model suitable for transom heights to 35". Photo shows Bristol Bay, Alaska, sailing gillnetters converted to power with this motor.

EVINRUDE
OUTBOARD MOTORS

Dave Rogers, President and General Manager, Big Bear Timber Co., Redlands, Calif.

"T5X...doing a real job at Big Bear."

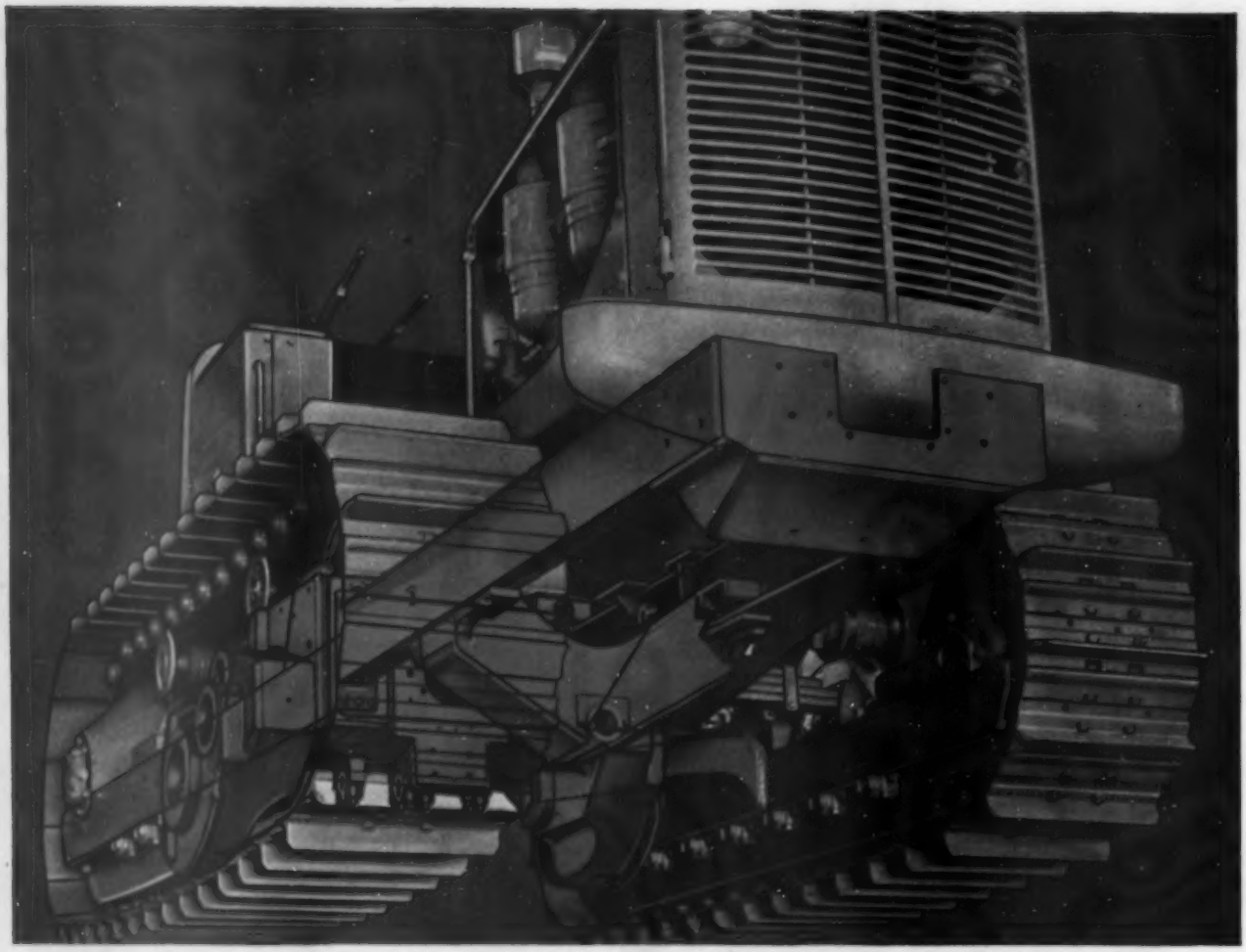
"We have nine Peterbilts hauling logs out of our operation in the Angeles National Forest. These trucks make two round trips daily between the woods and our Redlands mill, a distance of 65 miles.

"Our roads are generally good, but we do have some 15% adverse grades... and on one six-mile stretch the elevation drops from 8,500 to 2,300 feet. We rely on Union Oil products and service to keep our equipment rolling. These lubricants, particularly T5X, are doing a real job for us at Big Bear."

You'll find that T5X can do a real job in *your* trucks and equipment, too. For prompt delivery of T5X, the amazing purple motor oil, call your nearby Union Oil representative.

76 UNION OIL COMPANY
OF CALIFORNIA

Los Angeles: Union Oil Bldg. • New York: 45 Rockefeller Plaza • Chicago: 1612 Bankers Bldg. • New Orleans: 644 National Bank of Commerce Bldg. • Atlanta: 401 Atlanta National Bldg. • Kansas City, Mo.: 921 Rialto Bldg.



HOW THE MAIN FRAME CONTRIBUTES TO TOP TRACTOR PERFORMANCE

All-Steel Box A-Frame is a Key to Outstanding, Low-Cost Record of Allis-Chalmers Tractors

Loggers everywhere are putting new emphasis on shrewd equipment buying. And rightly so. To increase production, stay on schedule and make a profit in the face of today's high costs, they have to be *sure* of getting top value in design, performance and service features.

More and more of these loggers are now using Allis-Chalmers tractors. One of the big reasons is hidden in the heart of the tractor. It's the exclusive design which characterizes the main frames of all four Allis-Chalmers tractors. These frames are one-piece, all-steel, welded structural members (like the girders in a bridge or the columns in a building). They help provide greater strength and flexibility to withstand shock loads, better equipment mounting, improved weight distribution and outstanding service simplicity.

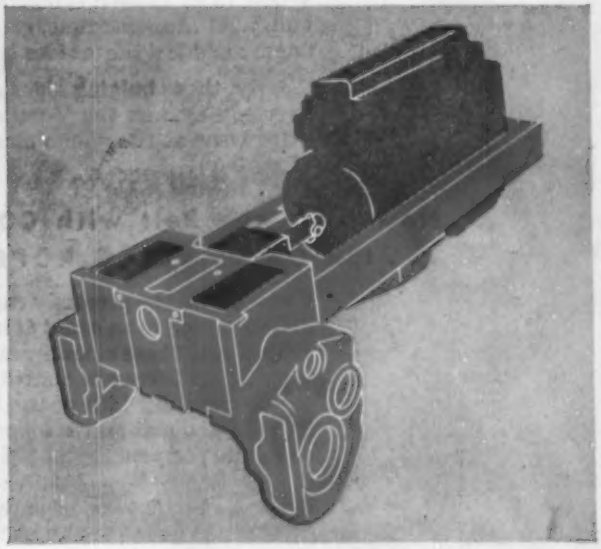
We invite you to see these advantages . . . first at your nearby Allis-Chalmers dealer, and then in a demonstration. Whichever size you may be interested in, you'll see a tractor that is not just modified . . . but designed new-from-the-ground-up to meet the needs of today's jobs.

ALLIS-CHALMERS
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

"Rolls with the Punch" — The resiliency of the high-tensile steel main frame enables it to flex slightly under extreme shock loads . . . without transmitting the strain to engine, clutch or transmission . . . thus offering extra protection to the complete machine.

Weight Distribution Designed for Today's Jobs— Box A-frame lets Allis-Chalmers use a modern engine . . . locate main parts for best over-all balance . . . put more weight lower in the tractor where it does the most good . . . make the tractor built to take it.

Better Equipment Mounting — Designed to best serve changing tractor application (today over 70 percent of all tractor equipment is mounted), this compact main frame allows bulldozers to be mounted in close . . . provides ample clearance for equipment like logging lift tongs . . . permits wider track shoes . . . improves performance of the entire unit.



Unit Construction for Service Simplicity — Since the main frame carries the *structural* load, power drive components are designed to do only their specific jobs. They can be readily removed, repaired or replaced without disturbing adjacent parts . . . saving service time . . . actually cutting down time because assemblies can easily be serviced under shop conditions if desired.

HD-20	HD-15	HD-9	HD-5
Weight 41,000 lb Hydraulic Torque Converter Drive 175 net engine hp	Weight 28,000 lb Choice of standard transmission or hydraulic torque converter drive	Weight 18,800 lb 72 drawbar hp	Weight 11,250 lb 40 drawbar hp

Notice the **CONCAVE SIDES** of **Gates V-Belts!**

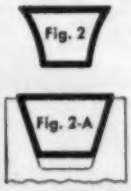
(U.S. PATENT NO. 1813998)

--that's why they last longer!

Just try this yourself. Bend any *straight-sided* V-belt (Fig. 1) as it bends in going around its pulley. At the same time, grip its sides with your fingers and *feel* those sides *bulge out!* (Fig. 1-A)

Clearly, those bulging sides are forced to press *unevenly* against the V-pulley—and this causes extra wear at the points shown by arrows (Fig. 1-A).

Now bend the Belt with CONCAVE SIDES . . . . . the GATES VULCO ROPE (Fig. 2)



You will feel the precisely engineered CONCAVE SIDES *fill out* to an *exact fit* in the sheave groove (Fig. 2-A). These sides press *evenly* against the V-pulley. All wear is distributed *uniformly* across the full width of the GATES VULCO ROPE—and this means *longer* belt life and *lower* belt costs for you.

When you buy V-Belts, be sure to get the V-Belt with the CONCAVE SIDES—the GATES VULCO ROPE!

Typical Gates Vulco Rope Drive—the Gates V-Belts are built with Concave Sides to insure longer belt wear.

VULCO ROPE **DRIVES**

THE GATES RUBBER COMPANY
DENVER, U.S.A.

Gates Engineering Offices and Jobber Stocks are located in all industrial centers of the United States and Canada, and in 70 other countries throughout the world.

CO-542

cut
more lines
per minute

with the

BERRY®

Hydraulic Carriage Drive

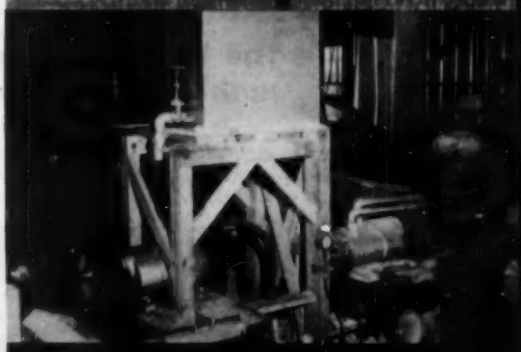
Users report 10% to 35% greater production after converting to Berry Hydraulic Carriage Drives. This is accomplished by faster carriage travel "back in the hole," quicker acceleration, instant reversability, less operator fatigue and less down time. Additional advantages include substantial savings through elimination of belts, greater safety of operation, smooth feed, positive "inching" control. Berry Drives are furnished as "package" units to suit individual sawmills, and are readily installed—usually in about two days.

SEND *coupon for details, or see your local Supply House or Sawmill Manufacturer.*

BERRY DIVISION

OLIVER IRON AND STEEL CORPORATION

PITTSBURGH 22, PA.



Note compactness of Berry installation above.

Berry Hydraulic Pump/Motor (interchangeable) used in sawmill carriage drive shown above.

Berry Division
Oliver Iron and Steel Corporation
Pittsburgh 22, Pennsylvania

Please send me details of Berry Hydraulic Sawmill Carriage Drives.

Name_____

Company_____

Address_____

The Land . . . . .
PATTERN OF industrial forestry in the Douglas fir region is shown in this aerial view of staggered setting logging on a tree farm, which assures natural regeneration.
Photo: Western Ways, Inc.

This Is a Tree Country

The Western States offer new opportunities in management and utilization

Douglas Fir Region Forests

Total land area of western Oregon and Washington—the Douglas fir region—is over 35 million acres.

Three-fourths of this—or 26 million acres—is commercial forestland.

According to 1945 government estimates, this gigantic tree farm contains 439 billion board feet of saw timber, enough to build a new house for every family now living in the United States.

On the basis of recent resurveys being made by the U. S. Forest Service the region may have a timber supply of over 600 billion board feet.

This boost is due to more accurate systems of inventorying, tallying trees of lower diameter which have become merchantable with increasing standards of utilization, and extensive restocking of cut-over lands.

New crops of timber are growing on nearly 17 million acres in western Oregon and Washington.

Douglas fir, west coast hemlock, western red cedar and Sitka spruce are the region's principal commercial trees.

West coast forests often have more than 50,000 board feet of wood to the acre.

They can grow an average of 700 board feet of new wood per acre a year—and on good sites 2000 board feet.

Land Ownership

More than half of the commercial forestland in western Washington and Oregon is owned by government. The federal government alone holds more than 10,000,000 acres. The balance is held by states, counties and municipalities.

Ownership of merchantable trees in 1945 showed 41.3 per cent in national forests, 10 per cent in Oregon and California Revested Railroad Lands, 1.3 per cent in other federal holdings, and 7.0 per cent in state, county and municipal holdings. All private owners were credited with 40.4 per cent.

In the Douglas fir region private owners—forest industries, farmers, investors and others—own 13,210,000 acres of commercial forest. One-third of this land is already certified in Tree Farms dedicated by the owners to continuing production of timber crops.

Ownership of Commercial Forestland
(Acres) (1954)

	Western Washington	Western Oregon	Total of Region
Federal and Indian	2,903,155	7,296,515	10,199,760
State	1,129,420	427,950	1,577,370
County and Municipal	514,105	545,195	1,059,300
Private	6,665,185	6,544,915	13,210,100
Total	11,211,865	14,814,575	26,026,440

The Forest . . . . .
OLD GROWTH forests of Douglas fir may contain 50,000 board feet an acre. The usual mixture of Douglas fir, western hemlock and western red cedar provides logs for sawmills, plywood plants and pulp mills.

VOLUME 81

THE Lumberman

NUMBER 8

AUGUST, 1954

EDITOR'S NOTE—This preview of the western forest region is offered as an introduction to the delegates attending the annual meeting of the American Forestry Association in Portland, Ore. September 6-9.

Many years ago Horace Greeley offered this sage advice, "Go West, young man."

To the young man looking toward a career in industrial forestry this advice holds good more than ever.

The far West offers a splendid opportunity to apply the theory and practice of forest management and wood utilization. Here, in a region sometimes called the last frontier of America, foresters today are hard at work balancing the budget between timber growth and timber drain. Working cooperatively, they have accomplished more than perhaps any other group of federal, private and state people working together for a common good. They are truly managing their forests.

Their objectives are those that have been reiterated by the American Forestry Association in its declaration of national policy.

These are: (1) to meet the essentials of forest production, (2) to improve the national timber crop in volume and quality to a degree sufficient to wipe out all deficits and build up a reserve, (3) to obtain a maximum of economic and social services from our forests by realistic application of the principal of multiple use and their management.

Fire, the common enemy of the forest, has been fought long and hard in the western area. As early as 1864 farsighted citizens in Oregon realized that wild fires cause needless destruction. They passed an act under which it became unlawful for anyone to set fire except on his own land or to permit fire to escape from his property.

Early Fire Organization

A series of bad fires in the early 1900's forced industry leaders to take action. In Idaho in 1906 patrols were organized to protect lands in intermingled government and private ownership. Cost of patrols and fire-fighting was shared. This was the beginning of cooperative forest protection through associations. This step forward by a handful of Idaho lumbermen exercised a tremendous influence in forestry and laid the foundation for cooperation through forest protective associations, widely in use in the West today.

In 1909 lumbermen from four states —Washington, Oregon, Montana and Idaho—met in Spokane, Washington through the sponsorship of the North Idaho Forestry Association to discuss control of forest fires. They organized the Pacific Northwest Forest Protection Association, changed in 1910 to Western Forestry and Conservation Association. The organization has sponsored leading forestry legislation in the West for 45 years.

The original group of 13 associations represented at the initial organization meeting has grown steadily. Within a short time, 30 active protective associations and their numerous cooperative patrols covered most timbered areas of the 5 western states.

State associations came next. Organized were the Washington Forest Fire Association, California Forest

American Forestry Association

For the first time in its 79 year history the American Forestry Association is holding its national meeting in Portland Ore., from Sept. 6-9. The program includes a one-day meeting session and three days of field trips.

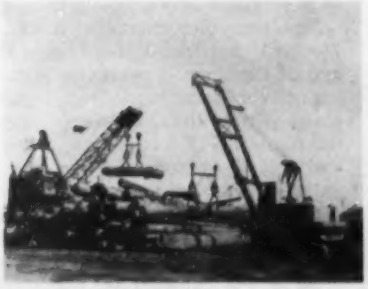
Created in 1875, the American forestry Association is the oldest national forest conservation organization in America. Through education, it advances the intelligent management and use of the nation's forests and related resources of soil, water, wild life and outdoor recreation.

Its purpose is (1) to bring about aaequate protection and perpetuation of these resources by creating an enlightened public appreciation of the need of conserving them through wise use. (2) To instill in Americans a wider knowledge and appreciation of their forests and their part in the social and industrial life of our nation.

The Association initiates, sponsors and carries on needed projects in conservation, in addition to its broad continuous program of education. It has sponsored four American Forestry Congresses, the last of which was held in Washington, D. C. in the fall of 1953.

In its 77 years of existence the Association has compiled a long record of efficient public service. Establishment of the U. S. Forest Service and creation of the nation-wide system of state and national parks and forests was due in part to the Association's efforts. Its educational work has stimulated public action and built public support for protection against forest fires and floods, for protection and control of soil erosion, for development of conservation policies in forest management, for control of forest insects and disease and for preservation of fish and wild life.

PROMISE FOR the mills of tomorrow are the Douglas fir region's thousands of acres of second growth, which through protection will provide unlimited wood for the future.



COVER PHOTO

FEEDING LOGS onto the sawlog barker's haul of Union Lumber Co., Fort Bragg, Cal. are a Whirley crane, left, and an Osgood 1000 2½ yard crane, right, equipped with air tongs designed by JESSIE TALLMAN.

Western Pine Region . . .

The Western Pine Region is one of the world's major timber areas. It extends from the Cascade mountain in Oregon and Washington east to the Black Hills of South Dakota and from Canada to Mexico. One-third of the land area of continental United States lies within this region, which takes in all or parts of 12 states.

Here is the home of three famous western pines—ponderosa, Idaho white and sugar pine. Other timber trees growing with them include Douglas fir, western larch, Engelmann spruce, the white firs, incense cedar, lodgepole pine and red cedar.

Of the total land area of approximately 723 million acres about 80 million acres or 11 percent is commercial forests. This vast green commonwealth has timber in abundance for today and the future. Put together, into one solid, unbroken woods, the Western Pine forest areas would form a Tree Farm the size of New Mexico, or a timbered belt one mile wide and 123,600 miles long, enough to girdle the earth at the equator five times.

This immense forest, containing an estimated 5 billion board feet of sawtimber, supports a lumber industry with an annual payroll of more than one-fourth of a billion dollars. It also supplies all or parts of the raw material needs for a growing pulp and paper industry, plywod and panel board plants, a pole, piling and treated lumber industry of large size, millwork, furniture and allied factories that add substantially to the region's forest dollar volume.

About 100,000 jobs and about $1 billion a year pumped into the economic lifestream is what the Western Pine Region forest means to its people.

Nearly 67 percent of all commercial forestland in the Western Pine Region is in federal government ownership. Three percent is owned by state and local governments and 30 percent is held by private owners.

The bulk of federal forestlands within the region are in 99 national forests.

In 1952 the Western Pine region produced over 7 billion board feet of lumber. Manufacturing methods have come a long way in the past decade; many new products have been developed and better utilization is on the increase. There is growing interest in using more of each log.

The lumber industry: number of sawmills in 1953 was 1900; total employment, 61,000.

Other forest industries: pulp, paper and container board mills, 22; plywood mills, 6; wallboard panel mills, 2; wood preserving plants (poles, piling, crossties, etc.), 15.

The most serious problem confronting the Western Pine forest future is losses from pests. Raids by tree-killing insects have cost the region an estimated total of 73 billion board feet of timber in the past 20 years. Diseases also have taken heavy toll.

Utilization: Douglas Fir Region

The kraft pulp industry and the hardboard industrey are newest segments of the region's diversified manufacturing activities. Currently the former is deriving the equivalent of more than three-quarters of a billion board feet of longs annually from chipped sawmill and plywood leftovers.

There are about 85 sawlog barkers in use in the western states, mostly in the Douglas fir region, producting bark-free milling leftovers for greater chip recovery and also increasing lumber recovery.

One diversified manufacturing center in the region, with nearly every type of conversion plant on the site, uses well over one million board feet of log supply daily.

At Longview, Wash., 50 miles from Portland, there are more than a dozen sawmills (including the two lagrest in the world), numerous planing mills, two plywood plants, three pulp mills, one paperboard plant, several shingle mills, a hardboard plant, a wood treating plant, a bark products plant, a pres-to-log plant, and a large furniutre factory which uses clear pieces of leftovers for stock.

Edge and end gluing, glued timber lamination, and other newer processes for making little pieces into big pieces are finding increasing use.

Tree Farms

Tree farms were born in the Douglas fir region. In 1941, in Gray's Harbor County, Washington, the nation's first tree farm, The Clemans, was dedicated to the perpetual production of timber crops. It initiated a program of private land permanently devoted to tree growing.

Since then the American Tree Farm program has spread to 36 states, with 5246 units including over 31 million acres.

Certified tree farms in the western region today are as follows:

Douglas fir	213 units,	4.27 million acres
Ponderosa pine	512 units,	5.43 million acres
Redwood region	26 units,	215,055 acres
Total	751 units	9.9 million acres

SELECTIVELY CUT ponderosa pine forest in eastern Oregon shows method used currently.

Protective Association and similar organizations in Montana. Oldest of them all was the North Idaho Forestry Association.

Protection Expenditures Large

These associations have been effective in enacting sound state forestry legislation. They have stimulated interest in sound state forestry codes and improved forest management on private lands.

Today the west leads the nation in organized fire protection. All of its commercial forestland is under organized pro'ection. State protective associations, with the exception of California where the compulsory forest patrol act has been repealed, share with the state the responsibility of supplying adequate protection to support fire prevention campaigns.

During the calendar year 1952 private expenditures for the western states for protection against fire aggregated $7,462,436, compared with federal expenditures of $1,374,281 in the same year, representing public interest and cooperative protection.

Private forest land owners in the western states, particularly in the Douglas fir region, are spending an average of 40 cents an acre and as much as $1.00 an acre per year to protect their lands against fire. They have invested large amounts to buy mobile equipment and install protection facilities on tree farm lands managed for permanent production of timber.

Western forests have been more exposed to insect attacks than probably any other section of the nation. Here, again, cooperative action has proved effective. Attacks of such enemies as the spruce budworm, the spruce bark beetle, the Douglas fir beetle, the pine butterfly, the silver fir beetle, the western pine beetle and other insects have reached epidemic proportions within recent years and have forced land owners to take immediate steps to combat the enemy.

Insects Are Menace

The recent campaign against the spruce budworm carried on in Oregon typifies the cooperative approach. This program, extending for 5 years, has enlisted the combined efforts of state, private and federal agencies. Intensive aerial spraying campaigns have been carried on annually through matching of cooperative funds. The spruce budworm has been brought to a standstill and the 1954 spraying program has been confined to a very low acreage.

Insect enemies are still at work. In Montana and Idaho, the Engelmann spruce bark beetle currently is raising havoc with well-laid logging plans of tree farm managers. Again, the combined efforts of state, private and federal agencies has resulted in an intensive salvage program which depends upon the accelerated harvesting of beetle-attached trees. Task forces organized to carry on this program have cooperated splendidly, proving that forestry for a common good can be carried on by all groups.

Western states have been leaders in initiating good forest practices on

Industries: Douglas Fir Region

Timber harvests bring more than $1½ billion of new wealth to the region each year, derived from logging, milling and the sale of lumber, plywood, pulp and paper, shingles, doors and other products made from wood.

In 1952 the region had 993 sawmills, 72 plywood plants, 26 pulp mills, 203 shingle mills and 10 board mills. There were also another 1100 miscellaneous wood-using plants.

The Douglas fir region is the birthplace of the nation's softwood plywood industry. Last year nearly a 100 plants in the region produced 3.5 billion square feet of ⅜ inch stock. All of the west and British Columbia produced 4.2 billion square feet, including pine and redwood.

In 1950 the region's log supply was used as follows: lumber, 71 per cent; wood pulp, 16 per cent; plywood, 10 per cent; shingles and miscellaneous, about 3 per cent.

In 1953 sawmills of the Douglas fir region produced over ten billion board feet of lumber. Pacific coast pulp mills in 1952 produced 2.7 million tons of kraft and sulphite pulp.

Redwood Region . . .

The redwood belt is a narrow strip starting in the extreme southern coastal tip of Oregon and extending southward into California to a point north of San Francisco. It is broken here and there in continuity and never extends more than 40 miles inland from the Pacific Ocean.

Actually, the redwood region forest contains a very high percentage of Douglas fir and today more volume of that species is being harvested than redwood (Sequoia sempervirens) itself. The typical redwood forest is well suited to selection cutting, because the mixture of species, varying in maturity, makes it possible to remove a portion of the stand and leave other trees behind.

Redwood is a tree of magnificent proportions, reaching heights of several hundred feet and girths of ten to twelve feet, on the average. Characteristically, it grows in scattered large groves, rather than in continuous forests. The harvesting of this king-size tree poses special problems, because an obstacle-free "bed" must be prepared for the giant's fall, to avoid shattering the valuable trunk as it drops to the ground.

Forest management in the redwood region has come of age. Selection cutting, carried on with tractors, is being practiced by more and more companies. Along with it has come increased emphasis on protection from fire, a radical change in thinking because the redwood forest previously was considered immune to fire. Slash no longer is burnt broadcast—it is left where it is light or perhaps spot-burned in heavy concentrations.

After a century of cutting it is estimated that the remaining volume of standing old-growth timber is about 30 billion board feet, plus over 6 billion of second-growth. With improvement in selection cutting techniques and better utilization, an adequate supply of redwood lumber will be assured. Major operators are establishing well-integrated forest management programs which will assure the future of the forest.

The northern California area today is one of the major lumber producers in the United States. Humboldt county probably produces more lumber than any other area in the nation. It has attained this position within a relatively few years. Total redwood production in 1953 in California was about 900 million board feet.

With increasing interest of the public in setting aside recreational areas, some 10 per cent of the area of remaining old-growth and about 25 per cent of the redwood timber volume ultimately will be allocated as state, federal and private parks not available for cutting. This total acreage of about 100,000 acres will be a permanent museum of one of Nature's grandest creations, the redwood tree.

private forest lands. Oregon in 1941 passed the first basic forest practice act which has since been applied and extended by other states.

This basic legislation prescribed minimum standards for regeneration of forest lands after logging. Generally, these provisions included the specifications of acreage and kinds of seed sources in all timber types and provide for a bond assuring artificial regeneration if natural reseeding fails.

Private forest owners have also joined in providing nursery stock for the reforestation of lands on which natural seed sources have been destroyed by fire. They have established an industry nursery at Nisqually, Wash. which supplies about 9 million seedlings annually. Within a few years most of the major denuded areas in the Douglas fir region will have been restocked with trees. Regeneration then will be kept current with logging, through natural seed sources.

Western timberland owners recognize the multiple use aspects of forest land. They realize that conservation of water, recreation, game management, grazing and other uses are important values from forests. This recognition is being translated into effective programs. These include allowing more and more use of private lands for hunting, fishing and recreation, under controlled access.

Beneficial effects of forest management on watersheds has been long recognized in the western region. A commission investigating the effects of forest operations on water volume and purity on the Cedar River watershed for the city of Seattle, Wash. concluded that "logging practices on

J. Neils Lumber Co., Libby, Mont.

SAWMILL FACILITIES

Annual production of lumber about 100 million board feet. Two single cutting band mills, two gang saws, one vertical resaw, one lathe mill, power house generating electricity for plant and community, 19 dry kilns, 2 automatic lumber stackers, 3 large crane sheds, box factory, planing mill and shipping facilities to ship 10 million bd. ft. monthly.

UTILIZATION FEATURES

Pres-to-logs plant with daily capacity of 85 tons; briquette machine being installed; one grain door dept. with daily capacity of 3000 doors; fabricating dept. for timber structures and bridges; pole treating dept, with 3 pole peelers, 2 pole framing machines, pressure treating plant with 2 cylinders 8 ft. in diameter and 144 ft. long.

LOGGING

The company has enough logging and dirt moving equipment to construct 130 miles or more of road yearly and to keep the plant supplied with logs and poles.

INTEGRATED center of Weyerhaeuser Tbr. Co., Longview, Wash. has pulp mills, sawmills, plywood and utilization plants.
Photo: Western Ways, Inc.

PLANTSITE of J. Neils Lbr. Co., Libby, Montana is first stop for Conservation Caravan on its westward trip to Portland, Ore.
Photo: Libby Chamber of Commerce

the watershed in the past have had no importance or discernible effect upon percipitation runoff quality water."

Other companies know that they have a serious responsibility to people of communities in carrying on good logging practices. Several have cooperated with municipalities in so conducting logging operations that watershed values are being protected.

Leaders in western forestry have been active in promoting the development of an American water policy which recognizes the role of forests and their benefits, with due consideration to all economic and social aspects involved.

American Water Policy

In recent statements to the President's Task Force on Water Resources and Power, they recommended these surveys be made: (1) a survey of the status of land ownership, state by state, to show the status of private, state and federal lands, (2) a basic land survey and (3) an inventory of water supply.

It was also urged that the survey be conducted on a state level. The federal government should lend encouragement and assistance to the consummation of interstate compacts between the states, but a superimposed federal authority was not desired.

Nowhere else in the nation will the intimate relationships between forests and water be more accentuated than in the western states. With irrigationists depending upon a steady flow from forested hillsides, with power developments depending on an adequate and a sure supply of water, with municipalities demanding clean and clear water, and with new industries demanding adequate supplies of water, the relationship between forests and water supply must be a cardinal factor in permanent management of forest lands. The West again will exercise leadership in developing a water policy beneficial to the best interests of all groups.

In the development of its long-range forest policy the western states have matured men who have won national prominence through their contributions to industrial forestry. The roster of these forestry stalwarts include such names as W. B. Greeley, George S. Long, E. T. Allen, Charles S. Cowan, Paul S. Keen, E. T. Stamm, Emanuel Fritz and many others, to mention only a few.

Small Timberlands

With small timberland owners, the west also has been aggressive in its action. Farm foresters are cooperating in all the western states on marketing and general forestry assistance.

The northwestern region was the first to take advantage of the provisions of the Timber Credits Act. Within recent months, two applications for loans were approved and cash loans were made by two national banks to two small timberland owners to carry on permanent management practices.

The western states are pioneering in carrying on studies relating to forest fire insurance and other long-range projects. Here, again, developments will be applicable to forestry in other parts of the nation. The west has led in developing the use of two-way radio in forestry operations. It is also taking an aggressive role in applying the new science of forest genetics to improve its growth stock.

The first and only cooperative sustained yield unit, established by the Forest Service, is in the Pacific Northwest. At Shelton, Washington the Simpson Logging Co. has entered into a 99 year agreement with the Forest Service, pooling its timber with that of the government. This agreement, made under the authority of U. S. Public Law 273, will stabilize forest communities dependent upon the timber harvest from these lands.

New Growth Is Future

Thousands of acres of immature forest offer the greatest single promise for the future of the industrial economy of the Pacific Northwest. Forest managers are experimenting with methods of thinking to capitalize upon the values in this tremendous reservoir of cellulose. Enormous volumes of wood are lost in the natural process of weeding and thinning that occurs in a stand. This lost wood can be captured by intelligently applied thinnings carried on at periodic intervals throughout the life of the stand, maturing the final crop for sawlogs or other higher values and realizing the income from wood that otherwise would have been lost.

An economic incentive for practicing the most intensive forestry in the United States has been given the western states. Kraft pulp mills and hardboard plants have given a new outlook to the forest management picture in this region. The impact has reached the forest.

Today logging residues, once considered unusable, are being garnered and gleaned from logged-over lands, through relogging and prelogging in the Douglas fir region and through more intensive initial harvesting. The chunks and small pieces, not usable for lumber, provide admirable diet for the region's kraft pulp mills. At the same time chipped milling leftovers from sawmills and plywood plants are supplying more raw material for these utilization plants.

If one were to sum up in one word what the West offers in forestry, it would be "Cooperation". Perhaps nowhere else in the nation have federal, state and private interests combined their talents and skills so effectively. This has resulted in a management effort that will put the land to work for maximum productivity. The look ahead is reassuring because teamed with good forest management is better utilization, reflected in an increasing number of plants providing economic outlets for low value forest materials. This will be the promise of forestry forever in the western states.

BOARD OF DIRECTORS, 1954-55, Philippine Lumber Producers' Association, Inc. From Left: PACIFICO DE OCAMPO, Sec.-Treas. and legal counsel; A. W. ROBERTSON, Findlay Millar Timber Co., Director; H. C. POPE, Insular Lbr. Co., 1st Vice-Pres.; ANTONIO DE LAS ALAS, Marsman Development Co., President; CARLOS P. FERNANDEZ, Nasipit Lbr. Co., 2nd Vice-Pres.; LUIS J. REYES, Woodworks, Inc., Director; J. G. BONOAN, Taggat Sawmill, Inc., Director; FLORENCIO TAMESIS, Anakan Lbr. Co., Director. Other directors not shown are MANUEL DIAZ of Sta. Clara Lbr. Co. and GUADENCIO E. ANTONIO of Western Mindanao Lumber Co., Inc.

SPEAR & JACKSON

Band Saws

Spear & Jackson Bandsaws can be counted on to perform with the best. Into them go the finest steel obtainable and a quality of workmanship in welding, swaging, grinding, and tensioning, gained from years of sawmaking experience.

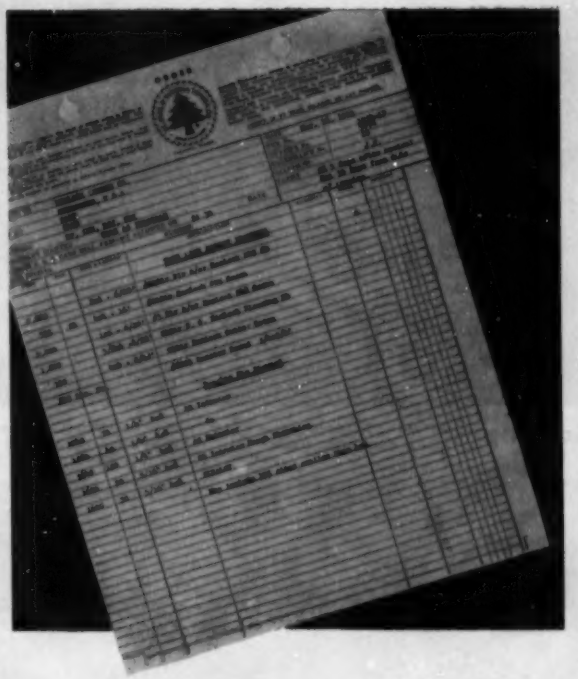
Spear & Jackson Bandsaws are custom-made to your exact specifications at our factory in Eugene, Oregon. Large and small operators alike are satisfied users.

SPEAR & JACKSON

EUGENE, OREGON

BAND, GANG, CIRCULAR SAWS, TEETH and HOLDERS

"The Saw Without A Flaw"



The Sales Slip is Vital to Forestry

Fundamentally, there is only one reason for modern forest management.

A sale.

If forest products were not ultimately sold, and consumed, there would be no need for conservation and utilization of the resource.

And there would be no *income* to carry on the forest program.

That's why St. Paul & Tacoma Lumber Company strives to develop the whole picture. Working both as an individual company—and in cooperation with others in the industry—we direct our efforts toward a continuing betterment of forestry practice . . . and toward a sustained sales demand for the products of that practice.

ST. PAUL & TACOMA LUMBER CO.

TACOMA 2, WASHINGTON

HOME OF THE FAMOUS TREE LIFE FAMILY OF FOREST PRODUCTS

Loading Hercules powered Manitowoc loader on Hall-Scott powered Maxi chassis loads Kenworth truck, Page & Page trailer equipped with 12-ft. bunks.

Landing Bucking tree-lengths into 32 foot logs with model 4-30 McCulloch saw. Right, 17,000 bd. ft. on Cummins powered Kenworth truck, Page trailer.

Yarding D8 Caterpillar with Carco arch yards in five sticks (1 and 2) Westfall Performer (3 and 4), with Cummins diesel engine, brings in five trees.

During late spring and early summer BCK Company, Inc., contract log hauling firm at Prineville, Ore., supplied Alexander-Stewart Lumber Co.'s 140M foot capacity sawmill with around 125M feet of logs daily by hauling with just three trucks. These BCK transport units carried large loads but were on a 15-mile haul as compared to 52-mile haul scheduled for later this year, when daily output will increase to 180 or 200M.

This firm has hauled logs for the same mill approximately ten years. Its fleet consists of seven Kenworth trucks—five modern 548's and one rebuilt job, all powered by NHR 300 hp Cummins diesel engines for logging, and a 5500-gallon tanker powered by 200 hp Cummins. With the increase of production on the extended haul, the inactive logging trucks will be put into service and an additional new unit is to be purchased and added to the woods-to-mill hauling fleet.

Each of the logging trucks has 12-ft. bunks, as do the Page & Page trailers equipped with 50,000 lb. Kay-Brunner axles.

The BCK organization, headed by president Robert Kincaid, has headquarters in downtown Prineville and operates its truck shop on the Alexander-Stewart millsite. These hauling units receive extensive maintenance and servicing.

When not at the shop or out on the job the trucks set in a special parking area equipped with electrical plug-in facilities for connecting onto Kim hotstarts with which the KW's are equipped. One of the loggers operated through the past winter equipped with an Ingersoll-Rand air starting motor. The results were reported as "very satisfactory".

Tractors Assemble Trees

Except for a relatively small amount of logs obtained from gyppos, Alexander-Stewart does its own logging but contracts the hauling between company woods operations and the mill to BCK. During the low output season this year the company conducted sanitation-salvage logging in an area which had previously been lightly harvested. Operations were on steep hillsides which have frequent cliffs and other outcroppings. Because of conditions encountered, the timber was removed in tree lengths. Of the six sets of fallers and buckers on the job, five operated in the woods falling, limbing and bucking to 10 in. tops; the other set bucked logs at the landing. This work is done with operator-owned chain saws — Mc-

Logging and Hauling Are Linked

by BCK Company, Inc. and Alexander-Stewart Lbr. Company at Prineville, Oregon

Culloch and Homelite.

Three D8 "Caterpillar" tractors, two equipped with dozer blades, assemble the tree-lengths at the skid-road in groups making up a swing haul, usually in groups of 5 "sticks". Two swing machines, a Cummins-powered Westfall Performer mounted on 21.00 x 25 rubber tires and a D8 "Cat" tractor pulling Carco arch, transport the long logs to the landing. Each of these units generally handles from around 4500 to 6000 board feet per swing and will operate up to around 1½ miles from the landing, according to woods superintendent Bob Griffith.

He finds the rubber-mounted tractor holds advantages over track-laying vehicles for handling swing loads. The advantages show up most prominently on long, down-hill swings.

On arrival at the landing, the tree-lengths are measured and bucked to appropriate mill lengths. A "landing cat", in this case a D6 "Caterpillar" tractor equipped with Fleco land clearing blade, bunches the bucked logs opposite the loading station and then pushes them into loading position. The loader, a Manitowoc on Maxi 5-ton chassis, uses end-hook gear set-up to load the logs onto BCK truck-trailers. A Hercules 145 hp engine powers the loading end of the rubber-tired loader and a 400 Hall-Scott drives the mobile chassis.

Key Personnel Listed

Key personnel of the Alexander-Stewart woods operation also includes Jack Wilkenson, forester and woods engineer, Bill Young, skidding foreman, and Ed Winn, road construction foreman.

The company road crew has two 14-yard Caryalls—a "Caterpillar" 70 and a LeTourneau, both pulled by D8 "Cats" equipped with model 25 "Cat" rear-end units; and Ingersoll-Rand 105 cu. ft. air compressor, Warco motorized grader, and two D8 "Cats" with "Cat" angle dozers.

Crew transportation in this organization is handled by two F7 Ford personnel carriers with 19-man Pacific bodies and the road crew's F4 Ford with 7-man Pacific body. A Dodge Power Wagon has been assigned to the right-of-way crew.

The logging operation and hauling organization are closely tied together communicationswise by a 26-unit in-

Utility Vehicles

Two important utility vehicles of the Alexander-Stewart woods operations are the lubrication truck and shop truck.

The former has facilities for lubricating power equipment in the woods and also carries emergency stocks of gas and diesel fuel.

The second vehicle, as a repair-maintenance unit, operating out of main shop at the mill, is in effect a mobile shop. The machine, an International truck with modified metal flatbed with low sides and hinged rear, was developed by Bob Griffith, woods superintendent, as an all-around utility shop vehicle.

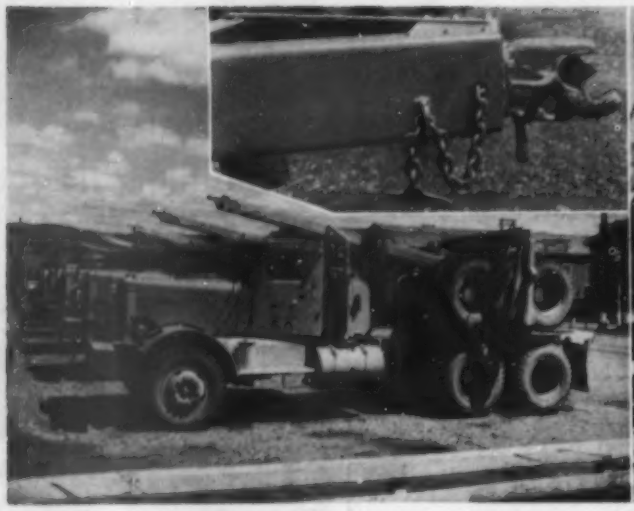
Steel boxes are along each side of the bed for tools and miscellaneous equipment. A large steel cabinet just behind the cab contains a complete electric welder and an electric light plant furnishing electricity both for lights and electric power tools. An acetylene welding set rides in one corner of the truckbed.

One of the most useful items is a bed-mounted crane with telescoping boom and telescoping spar, both constructed of tubular steel. By hand cranks the spar can be extended or shortened, the boom swung to 45 degrees from each side of center and the cable operating in conjunction with the crane unit can be used to lift equipment or parts of considerable size. Some lifted have been heavy enough to raise the front end of the truck from the ground.

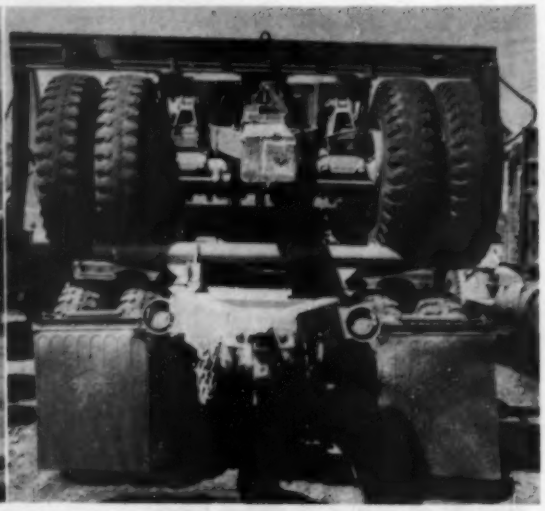
A roller mounted carriage, with hook affixed to side opposite the rollers, rides on the boom. In transferring a heavy object from the ground onto the truck-bed this little mobile unit plays a strategic part. First the cable is fastened to the object and cranked in until the item to be loaded is above the truck bed. The carriage is then rolled out toward the end of the boom and hooked to the object. As the operator slacks off the cable, the attached load rides down the boom to the truckbed.

Repairs **Top, BCK 5300-gallon sprinkler truck being filled with Fairbanks-Morse pump, driven by International engine. Bottom, shop truck has tools, light plant.**

Bunching **Top, D8 Caterpillar skid tractor arrives at wheel road with turn of tree lengths. Bottom, bunching bucked logs; Fleco blade used on D6 Caterpillar.**



Trucks BCK's fleet: Cummins Kenworth trucks, Page trailers, KIM hotshots. No. 50 truck has Ingersoll-Rand air starting motor. Inset: Premier hitch.



Trailer Close-up of truck-mounted Page & Page logging trailer equipped with 50,000 pound Kay-Brunner axles. Most units are equipped with Kelly tires.

dustrial 2-way (Motorola) radio system. Logging trucks, crew busses, pick-up trucks and personnel cars are all equipped with mobile sets; the Alexander-Stewart main office, and both shops have fixed-position facilities.

An addition to be made to the logging equipment this summer will assume importance in accounting for the accelerated production schedule. An Osgood 825 loader mounted on 12-tire 12 ft. self-propelled Osgood chassis with heel boom and Osgood heel-type air tongs has been ordered from Western Equipment Co. With 4 D8 "Cats" (two with Carco arches) and the Westfall Performer doing the skidding, the new Cummins-powered (NHBI 200 hp) Osgood doing the loading and the seven Kenworth-Page truck and trailer units doing the hauling, production will reach the planned 180 to 200M per day, Griffith says.

Logging is to continue on tree-length basis except for short corners, where they are bucked to 32 ft. logs in the woods.

On the long-haul, expanded production set-up the trucks will make two trips per day to the mill. Between 60 and 70M feet per day will then be dry decked at the mill with a Lima 101, powered by Waukesha gas engine, using an Esco log grapple. The decking will be handled by one man, a system the company inaugurated last year. Griffith reports that the system cut decking time in half and reduced hazard to personnel. End hooks were previously used in the decking process.

Strike Situation Is Reviewed

Still strikebound at presstime, the Northwest Douglas fir timber industries entered their second month with the negotiating committees of both unions and management holding firmly to their positions. The industries have been struck by the International Woodworkers of America, CIO, and the Lumber and Sawmill Workers, AFL.

Both the IWA and the LSW are striking for a 12½-cent hourly wage increase. Employers have contended, since negotiations began some seven months ago, that the economic position of the industry does not justify a wage increase.

Employer figures show no-wage-increase contracts have already been signed at 43 companies covering 10,855 employees represented by 33 local unions. These figures, plus various "back-to-work" movements on the part of at least 1,110 employees who have crossed both IWA and LSW picket lines at 23 operations, indicate to employers that if the unions were to permit local membership votes on their offer, then the strike would soon collapse.

A number of wage concessions have been made but most of these have been made at smaller operations. Employers refuse to consider these interim stipulations as bona fide agreements, because in each case, the final wage increase is dependent on automatic re-negotiating at the termination of the major strikes.

According to press reports, the west coast lumber strike is bringing a new chunk of business to southern pine producers. Prices on some grades of lumber have climbed $3 and $4 a thousand bd. ft. Sales have jumped as much as 35 per cent for some companies.

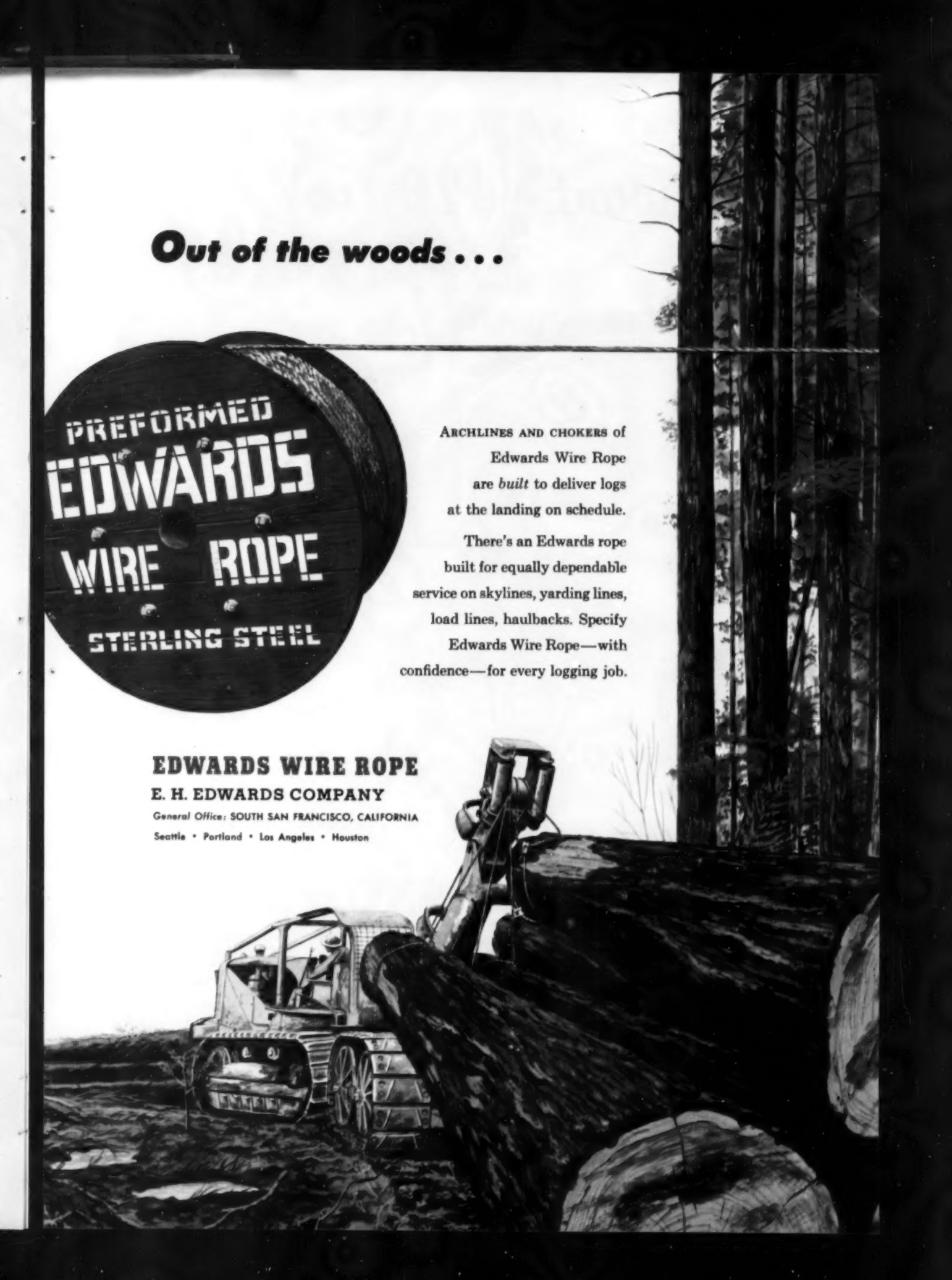
Drop in log inventories was reported by the Pacific Northwest Loggers Association, which listed 387,911,000 feet in log booms on July 1 this year against 462,911,000 feet last year. Puget Sound booms held 366,177,000 feet this year against 476,744,000 last year.

While larger operations are down in the fir belt, small and medium mills were reported operating full blast running several shifts and 7 days a week. The pine region for the most part is in operation. Railroad shipments of lumber on the Southern Pacific, Oregon's major line, have only been down about 25 per cent. Meanwhile the strikebound plywood industry is operating at about 25 per cent of capacity. Coops are in full production in most cases.

Kiln Drying Clinic

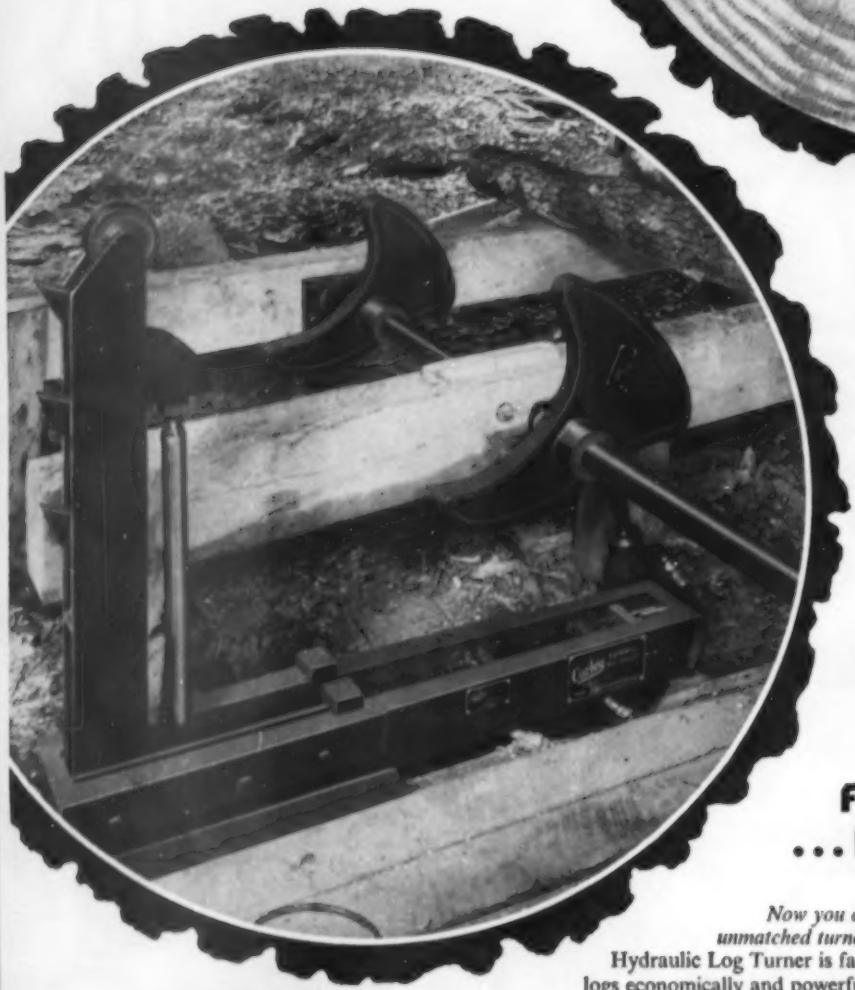
The third successive annual 6-day kiln drying clinic will be held under the sponsorship of the New England Kiln Drying Association at the University of Massachusetts in Amherst, Mass., September 13-18.

This kiln drying clinic will be devoted entirely to lectures and discussion periods, with special attention being given to assisting men enrolled in the clinic to solve their specific problems in wood seasoning. It is planned to conduct this clinic with instructors from the Forest Products Laboratory, the University of Massachusetts, and the Northeastern Forest Experiment Station.


Out of the woods . . .
PREFORMED
EDWARDS
WIRE ROPE
STERLING STEEL
ARCHLINES AND CHOKERS of Edwards Wire Rope are *built* to deliver logs at the landing on schedule.
There's an Edwards rope built for equally dependable service on skylines, yarding lines, load lines, haulbacks. Specify Edwards Wire Rope—with confidence—for every logging job.
EDWARDS WIRE ROPE
E. H. EDWARDS COMPANY
General Office: SOUTH SAN FRANCISCO, CALIFORNIA
Seattle • Portland • Los Angeles • Houston

If you want

LOWER PAYROLLS!



Corley 2

Cylinder Hydraulic Log Turner

with STOP and LOADER

Fast and Powerful ... Easier to Operate

Now you can get bankable payroll savings and unmatched turner performance, as well! The Corley Hydraulic Log Turner is fast enough to handle small diameter logs economically and powerful enough to handle large logs with ease. By using two hydraulic cylinders you can get a flipping action. This enables the operator to flip the small logs and cants whereas a single cylinder turner has a tendency to push them straight up. The Corley turner bar can be pushed forward at any point on the upward or downward strokes to apply pressure against the log or cant, and shove it against the knees to be dogged.

This is only a part of the story of savings and better output of the CORLEY 2 CYLINDER HYDRAULIC LOG TURNER . . get the complete facts . . write

Corley

Manufacturing Co.

CHATTANOOGA • TENNESSEE

DIRECT FACTORY BRANCHES:
LITTLE ROCK, ARKANSAS • PORTLAND, OREGON

Photo: Watson & Meehan, San Francisco, Calif.

Caldor Lbr. Co. Salvages Sinkers

A POND CRANE designed to retrieve sinkers from the log pond of Caldor Lbr. Co., Diamond Springs, Calif. has proved itself an efficient unit, according to C. G. PRICE, general manager. It saves hard work and man-hours.

The crane was built in the Caldor shop under the direction of L. A. SMITH, master mechanic. The basic unit was a steam-powered, wood-burning, industrial Brownhoist railway crane. The truck, boiler and cab were junked. The platform, hoisting drums and boom were retained. A 165 hp Cummins diesel, with a Twin Disc Model 5-100-16-TC11 torque converter was installed as the power unit.

The Crane is installed on a special concrete pier between the log dump and log slip. From this position it is easy to get the sinkers off the pond bottom and simpler to place them on the log slip.

Crane operator in photos is RAY THOMAS. On small raft is pond boss RICHARD GARDNER. Other pondman is K. J. NILSEN.

Now in its 6th year

NOPAK Shelf-Stock Service...

based on these 2 Standard Mounting, Class 1, Cushioned Cylinders

LIST PRICES F.O.B. Milwaukee, Wisconsin

STOCK STROKE LENGTHS — Double Acting Cylinders									
Cyl. Dia. Bore	1"	2"	3"	4"	6"	8"	10"	12"	15"
1½"	24.16	25.72	26.08	26.44	27.16	27.88	28.60	29.32	30.40
2"	26.24	27.88	28.32	28.76	29.64	30.52	31.40	32.28	33.60
2½"	32.36	34.12	34.68	35.24	36.36	37.48	38.60	39.72	41.40
3"	35.04	37.28	37.92	38.56	39.84	41.12	42.40	43.68	45.60
4"	40.84	43.68	44.52	45.36	47.04	48.72	50.40	52.08	54.60
4½"	48.96	51.92	52.88	53.84	55.76	57.68	59.60	61.52	64.40
6"	66.60	70.80	72.20	73.60	76.40	79.20	82.00	84.80	89.00
8"	——	126.80	129.20	131.60	136.40	141.20	146.00	150.80	158.00

By specifying NOPAK Shelf-stock, you buy quality cylinders at the lowest possible prices, you eliminate waiting for "specials", reduce engineering costs. Compare the prices and scope of NOPAK Shelf-stock (1½ x 1" to 8 x 15") with competitive offerings — and you will specify NOPAK.

● Basic mountings "A" or "E" convertible to "B", "C", "D" or "F", (see below) by changing cylinder heads. Add 10% to above prices, (no extra charge 8" bore). ● Piston Rods NF male thread. ● Cushioning can be eliminated on rod, blank or both ends by removing spring and ball-check.

NOPAK 4-Way Valves, hand, foot, solenoid, or pilot operated, to actuate all cylinders, also in Shelf-stock.

GALLAND-HENNING NOPAK
2779 SOUTH 31st STREET
MILWAUKEE 46, WIS.

NOPAK
VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

TEAR OUT THIS AD for Reference, — or write for extra copies.

PACIFIC COAST REPRESENTATIVES: THE WILLARD ENGINEERING CO., 316 W. 28th Street, Los Angeles 7, California • TRANSMISSION ENGINEERING CO., 68 Stevenson St., San Francisco 5, California • J. M. O'BRIEN, 32 N. Holman St., Portland 11, Oregon • E. C. GRIFFIN COMPANY, 524½ First Ave. South, Seattle 4, Washington • JOHN F. WOODHEAD, c/o Sales Engineering Co., 529 W. 8th St. South, Salt Lake City, Utah • Western Machinery Co., N. 808 Division St., Spokane 11, Washington

Barker Review

"What Barker Shall I Install?"

is question asked by sawmill operators interested in more lumber and chip recovery.

EDITOR'S NOTE—Intelligent selection of proper barking equipment is a problem facing many mill operators. The following review of barking equipment in use by the western forest products industry is presented by THE LUMBERMAN as a special service feature. We hope the information given will be of assistance.

In a subsequent issue of THE LUMBERMAN a similar report will be given on barking equipment and installations in the Southern Pine region.

In 1942 the first successful hydraulic whole log barker was installed on the Pacific coast. Placed in operation in a pulp mill, it effected a material reduction in wood losses and crew size, and also recovery of cleaner wood.

In 1947 the first sawlog barker in the Douglas fir region, also a hydraulic unit, was installed by Weyerhaeuser Timber Co., in Mill 1 at its Longview, Wash. branch operation. The machine, made to handle very large logs, (up to 60 feet long, 10 feet in diameter and 45,000 pounds in weight), was designed by company engineers and has not been duplicated elsewhere, either at other company branches or as a commercial unit.

Since 1947 the increase in sawlog barker installations has been phenomenal. It is estimated that in the western states and British Columbia there are approximately 85 barkers at work today removing bark from logs before they enter the mill to be made into lumber. (The southern states have an additional 30 barkers in use.) These installations include both hydraulic and mechanical units, manufactured in varying designs and sizes by seven principal manufacturers and some smaller producers.

This surge in barker installations is due to several reasons. In essence, heightened interest in removing bark from sawlogs is due largely to the maturing of the utilization economy. Increasing costs of raw material, or stumpage, have forced prudent mill operators in the Douglas fir, ponderosa pine and redwood regions to appraise critically more complete utilization of milling by-products, which in the form of sawdust, slabs, edgings and trims may comprise up to 40 per cent of log volume after a log has been manufactured into lumber.

Milling by-products have become a new source of income for many sawmill operators. Reduced to chips, the raw material used by an expanding number of Kraft pulp mills and hardboard plants, this manufacturing residue formerly consigned to the burner now may put a marginal operation in the break-even or the profit bracket, provided economics are favorable for shipping chips to chemical conversion plant. Other new by-product plants promise to open more outlets for chip consumption.

Although barking equipment may appear expensive, a careful evaluation of all factors involved usualy proves the investment is economically sound.

In the pulp and paper industry barking equipment is a necessity. In the pole and post industry it is essential in preparing the material for more effective preservative treatment. In the plywood industry the blocks must be bark-free to peel the veneer.

In the lumber industry use of barking equipment results in the following production benefits: logs are prepared for more efficient breakdown in sawing; bark-free slabs and edgings are produced for conversion into chips; bark is recovered in suitable condition for further processing; labor loss is reduced because of less saw sharpening; better mill clean-up and fewer accidents.

In many of the larger mills, barking ahead of the headsaw may add from $1.00 to $2.50 per thousand board feet of lumber cut to the returns from the sawmill operation. Average savings for large mills are slightly over $1.00 a thousand. In addition, there are the possible returns from recovering chippable material from bark-free leftovers which usually go to the burner.

Barking results in increased chip output. Production of chips in sawmills in the Douglas fir region averages about .2 units per thousand board feet net log scale of clean wood only. Adequate ripsawing and slab barking may raise the recovery to .35 units per thousand board feet. With whole log barkers the recovery is about .6 to .7 units of chips.

One fairly large mill cutting small logs reports .83 units of chips per thousand bd. ft. Because small mills produce fewer chips per thousand board feet without barkers, log barkers may give the greatest increase in chip production in mills sawing small diameter logs.

There is no one "universal" barker which will meet the requirements of all sawmills. All factors must be evaluated and an intelligent selection of equipment made on that basis. "Complete barking" is a relative term, because that considered adequate for a container board pulp mill might be unsatisfactory for a sulphite mill.

Purchasers of sulphite pulp chips are tending to restrict allowable bark content to a maximum of .05 of one per cent. Rejected sulfite chips may be sold as kraft chips for which allowable bark content runs to about one per cent maximum. However, average is not expected to exceed .4 of one per cent.

Speed of barking may or may not be a factor. Water supply and disposal of effluent, size and species of logs, location of log storage facilities and sawmill and many other factors must be considered.

The final cost of a barker installation may include many expensive items, like conveyors and transfers, and mill reconstruction, that can not be charged against the barking unit alone. Each installation must be tailored to fit the mill. Barking units selling for $60,000 may well require an outlay of $300,000 or more.

In the following review of sawlog and plywood barking equipment THE LUMBERMAN presents an up-to-date summary of the principal barking equipment available commercially and its operating characteristics. Also included are detailed descriptions of some of the newest installations in the western states, engineered to meet varying problems posed by species, availability of water supply and physical factors.

Bellingham Type Barker

MANUFACTURER: Sumner Iron Works, Everett, Washington, and Canadian Sumner Iron Works, Ltd., Vancouver, B. C.

DESIGN HIGHLIGHTS: Designed to bark heavy pulp and sawlogs from 8 to 48 feet long and from 6 to 12 ft. in diameter. Sizes currently built: Pulp Mills: Large—Logs up to 24 ft. long, 72 in. in diameter; Medium—Same, up to 60 in. in diameter; Small—Logs up to 10 ft. long, 42 in. diameter. Sawmill: Large—44 ft. length, 84 in. rated maximum diameters; Medium—24 ft. logs, 60 in. diameter. Special models built for special uses.

PRICE: From $50,000 to $80,000 (1953) Includes log stops, loader and log bunkers. (Pump works not included.)

OPERATION: Logs to be barked are carried from the log slip on cross-transfer chains and kicked broadside onto the barker trunnion wheels which rotate the log at controlled speeds. A single overhead jet which may be raised and lowered or turned through 360 degrees (later models), traverses the length of the log to remove the bark. The barking cycle is completed when the log is kicked back onto the log slip. Feed works and nozzle carriage may be stopped to clean bark from around knots and in bark seams. Power—(est.) 1200 hp. supplying 1150 gpm at 1400 psi 1600 to 1800 hp. (entire operation). Capacity—4800 lineal feet per hour (may fluctuate depending on average log diameter). Crew — one operator. Recent modifications have reduced maintenance and improved efficiency. a. Nozzle rotation increased from 9 degrees to 360 degrees. b. Flexible connections of original design required a number of hoses and approximately 64 individual connections in the water supply system. These were first reduced to 12 and at present are replaced by high-pressure steel swing joints. First hoseless machine at Enumclaw, Wash., at Weyerhaeuser plant.

INSTALLATIONS: B. C.: Alaska Pine & Cell., Ltd., Port Alice and Woodfibre: Columbia Cell. Co., Ltd., Prince Rupert; Bridge Lbr. Co., Mitchell Island, Vancouver. WASHINGTON: Puget Sound Pulp & Timber Co., Bellingham; Rayonier, Inc., Hoquiam and Shelton; Col. River Paper Mills, Vancouver; Crown Zellerbach, Camas and Port Townsend; Scott Paper Co., Soundview Div., Everett; Weyerhaeuser Tbr. Co., Mill "B" and "C", Everett; Weyerhaeuser. Enumclaw and Pulp Div., Everett. OREGON: Publishers' Paper Co., Oregon City; Ore. Pulp & Paper Co., Salem; Weyerhaeuser Tbr. Co., North Bend; Coos Bay Pulp Corp., Empire. CALIFORNIA: Fibreboard Prods., Inc., Antioch; Union Lbr. Co., Fort Bragg. Paper Makers Pty., Ltd., Burnie, Tasmania, Australia; Ketchikan Pulp Co., Ketchikan, Alaska.

Hydraulic Type

• • •

Hansel Hydraulic Ring Barker

MANUFACTURER: Hansel Engineering Co., Inc., Seattle, Wash., and Vancouver, B. C.

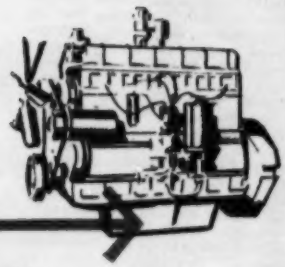
DESIGN HIGHLIGHTS: Designed to bark pulpwood and sawlogs with diameters from 2 inches to 74 inches and lengths from 4 ft.

PRICE: Depends on individual installation requirements. Generally, the barker alone

Mile after Mile...

TYDOL HD

Triple Protection Here Keeps Big Jobs on the GO!



Busy engines pile up more mileage between overhauls with the triple protection of Tydol HD Motor Oil. It cleans out sludge and grime, frees sticky valves and rings with fast-acting detergency. Cylinders and bearings are protected against rust and corrosion by Tydol HD's inhibitors, even when shut down. Its tough film won't drain off...lubricates instantly and avoids warm-up wear. Keep your engines on the go and out of the shop with the motor oil that *cleans* as it *protects* as it *lubricates*...*Tydol HD.*

TIDE WATER ASSOCIATED OIL COMPANY
(Western Division)

3 GREAT OILS
For Heavy Duty Hauling

100% paraffin base oils scientifically compounded with selected additives for heavy duty.

- **TYDOL HD**—***High Detergency***... for any type engine in normal heavy duty.
- **TYDOL HD S-1**—***Higher Detergency*** ...for stop-and-start service or engines subject to continual overloading.
- **TYDOL HD S-2**—***Highest Detergency***...for diesel engines in the most extreme service conditions.

Ask your local Flying "A" Representative which Tydol HD is best for you.

TYDOL HD
MOTOR OIL

Barker Review

averages about $1000 per inch of ring diameter. A complete installation may cost from $250,000 to $311,000.

OPERATION: This original ring barker is a compact hydraulic unit easily installed in line with the log slip. Logs may be carried through the rotating ring by either feed rolls or conveyor chain, while multiple jets remove the bark. Ring is adjustable through hydraulic controls both to center the log and move the entire unit short distances along length of log. Ring sizes are from 18 to 80 inches, inside diameters, including 9 standard sizes. Power: pump, 800 hp. (approx.) furnishing from 600 to 800 gpm at 1200 psi.; ring, 50 hp. for turning. Crew—4 to 6 men. Capacity to 1200 (fbm) avg. log, 432,000 vol. peeled per day (fbm).

INSTALLATIONS: B. C.: MacMillan & Bloedel, Port Alberni; Canadian Forest Prod., Vancouver; Pac. Mills, Ltd., Ocean Falls; Powell Rvr. Lbr. Co., Powell Rvr.; Alaska Pine Mills, New Westminster; B. C. Forest Products, Youbou. WASHINGTON: Crown Zellerbach, Camas; Rayonier, Inc., Port Angeles; St. Paul & Tacoma Lbr. Co., Tacoma; Weyerhaeuser Tbr. Co., Snoqualmie Falls, and Longview. OREGON: Pilot Rock Lbr. Co., Pilot Rock; Weyerhaeuser, Springfield and Klamath Falls; Crown Zellerbach, West Linn. IDAHO: Potlatch Forests, Inc., Lewiston and Coeur d'Alene; Boise-Payette Lbr. Co., Emmett. International Paper Co., Natchez, Miss. (pulpwood barker); Kirby Lbr. Co., Silsbee, Tex.; Rayonier, Inc., Jessup, Ga.

• • •

Hansel Sawmill Arm Barker

(Oscillating Arm or Wig-Wag Type)

MANUFACTURER: Hansel Engineering Co., Inc., Seattle, Wash., and Vancouver, B. C.

DESIGN HIGHLIGHTS: Designed to bark pulpwood and sawlogs with varying diameters and of any length. Intended for use with available water source, regardless of contamination. Millwright should be able to make repairs.

PRICE: No price information is available, but is considered to be a lower priced unit than conventional ring barker.

OPERATION: Can be placed in the log haul. Has one nozzle on each side of the log and a smaller top oscillating nozzle. Flap across log haul controls length of stroke of nozzle arms, speed of stroke and speed of log haul, all through a series of follow-up cylinders and levers. The operator can override this automatic action if desirable. Log haul speed varies from 16 to 60 ft. per min., depending on log size. Power reauirements approximately 1200 hp. to provide 1000-2000 gpm at 1300 psi., at Universal Lbr. & Box Co., B. C. Less for smaller logs.

INSTALLATIONS: Western Forest Industries, Honeymoon Bay, B. C.; Universal Lbr. & Box Corp., Vancouver, B. C.

Hansel Trunnion Barker

MANUFACTURER: Hansel Engineering Co., Inc., Seattle, Wash., and Vancouver, B. C.

DESIGN HIGHLIGHTS: Designed to bark sawlogs of varying length and diameter. 16 to 20 ft. logs, up to 5 ft. in diameter on one installation to date.

PRICE: No price information. Considered to be low cost capital investment, with low horsepower requirements.

OPERATION: The only installation made to date is designed to handle 16 to 20 ft. logs up to 5 ft. in diameter on one shift basis, design capacity being 150M bd. ft. per 8 hours. Distinguishing feature is use of rotating trunnions to drive the log. A single nozzle, with slotted port, directs water under 1600 psi. pressure down on log at angle of approximately 50 degrees to log axis. Nozzle sets above and ahead of front end of logs entering barking chamber. Nozzle head is oscillated laterally, 191 strokes per minute. This fan-shape jet swipes back and forth along log as it progresses through chamber on rotating trunnions. Big feature is low water and power consumption, designed essentially for medium sized mills. Unit is extremely flexible and arranged so that operator has full control of log at all times. He can vary log speed through the barker. Nozzle can be brought to point above log to produce best barking. By means of unloading pan, species can be sorted into two different pockets.

INSTALLATIONS: Harris Pine Mills, Pendleton, Oregon.

NOTE: Hansel Manufacturing Co. is also working on a mechanical barker.

• • •

Simons Barker (Rotary Head)

MANUFACTURER: Western Barkers, Ltd., Vancouver, B. C.

DESIGN HIGHLIGHTS: Designed to bark pulpwood and saw logs. Has been used successfully in barking redwood in sizes ranging from 6 to 60 inches. Used in South to bark gumwood and other hardwood species.

PRICE: Estimated cost figures for 60-inch machine: barker, $80,000 to $90,000; pump and drive, $25,000; control panel, $1,500. Plus cost of equipment for log handling, water circulation and power.

OPERATION: Barking is done by nozzles in two rotating heads turning about 460 rpm. The upper head is automatically adjustable to log diameters. The lower head is fixed. Each head has two jets inclined toward each other at from 14 degrees to 30 degrees which throw a cone of water as the log passes. Logs are not spun but may be indexed; and are carried on live rolls. Sizes—24 inch, 36 inch, 40 inch, 44 inch, 60 inch (log diameter). Power—1250 hp. furnishing 1250 gmp at 1200 to 1300 psi. Capacity—should handle 50,000 fbm per hour (33 inch logs barked at about 90 lineal fpm). Crew—barker at Canadian White Pine, B. C., runs automatically without crew. One man usually.

INSTALLATIONS: B. C. Forest Prod., Victoria, Vancouver Island, B. C.; Canadian White Pine, New Westminster, B. C.; Canadian White Pine, "C" Mill, Vancouver, B. C.; Elk Falls Co., Ltd., Campbell Rvr., Vancouver Island, B. C.; MacMillan & Bloedel, Chemainus Div., Vancouver Island, B. C., and Harmac, Vancouver Island; Masonite Corp., Ukiah, Calif.; International Paper Co., Natchez, Miss.

• • •

Worthington Whole Log Barker

MANUFACTURER: Worthington Pump and Machinery Corp., Seattle, Washington.

DESIGN HIGHLIGHTS: Designed to bark saw logs.

PRICE: No price information available.

OPERATION: A reversible and variable-speed feeding system, composed of ribbed rolls, passes whole logs through a tri-segmented adjustable ring where multiple jets of water remove the bark. Of the 36 sets, only those needed to cover the log are used at one time. Ring segments are automatically adjusted to keep the nozzles 15 or 16 inches from the bark surface during barking. Nozzles—36 each. ¼ by ¾-in. delivering 160 gpm. Pumps—2 each. Provide 1200 to 1400 psi. at velocities of 400 fps. Power—Pumps, each 1250 hp., plus additional power for feed. Capacity—Large logs, 180 fpm. Crew—operator.

INSTALLATIONS: Soundview Pulp Co., Everett, Wash.; St. Regis Paper Co., Tacoma, Wash.; Inland Empire Pulp & Paper Co., Spokane, Wash.; Spaulding Pulp & Paper Co., Newberg, Ore.

• • •

Weyerhaeuser Hydraulic Barker

MANUFACTURER: Weyerhaeuser Timber Company, Longview, Washington (for own use).

DESIGN HIGHLIGHTS: Designed to bark sawlogs up to 9 feet in diameter; 26 feet long.

PRICE: No cost figures published. Not a commercial model.

OPERATION: Conventional conveyor bypasses log to barker unit set alongside the log haul, where it is indexed or rotated between passes of a single jet carried on a shotgun feed. Log is fed forward and rotated on trunnions through jet. Barked logs are returned to main loghaul. Power—Two 5-stage pumps supply 850 psi. water and a 3-stage booster pump used for 1250 psi. pressures. Each pump requires 500 hp. Capacity—Average log barked in from 30 to 40 seconds.

INSTALLATIONS: Mill 1, Weyerhaeuser Timber Co., Longview, Wash.

Burnt River Barker

MANUFACTURER: Sumner Iron Works, Everett, Washington, and Vancouver, B. C.

DESIGN HIGHLIGHTS: This barker was developed at the Burnt River Lbr. Co., Baker, Oregon. It is designed to handle log lengths from 12 to 43 ft. long and diameters from 6 to 60 inches, in three different sawmill type models. A pulp mill type, made in two models, will handle 8 ft. logs, from 4 to 36 inches in diameter.

PRICE: No prices quoted. Each barker is built to meet requirements of individual installations.

OPERATION: Logs are carried longitudinally through barker on trunnion wheels which rotate the log. Bark is removed by revolving sideheads with angled teeth, while rotating wire brushes located a few inches behind the heads remove the cambium layer. Power requirements are low. Equipment is mounted on structural steel base as unit which may be divided into sections for shipment and economical erection. Operator has complete control from cab. Air-loaded cylinder mechanisms with adjustable pressure handle log movement.

INSTALLATIONS: Original unit at Burnt River Lbr. Co., Baker, Oregon. New unit being installed in California sawmill. One pulp mill trial unit in Washington.

Mechanical Type

Andersson Debarker

(Two Types: Type A—Stationary; Type B—Portable)

MANUFACTURER: Soderhamn Machine Mfg. Co., Talladega, Alabama.

DESIGN HIGHLIGHTS: Designed to bark pulp and sawlogs. Type A: Stationary type designed to bark logs from 2 to 30 inches in diameter and 4 ft. or more in length. Type B: Portable type designed for logs from 3 to 12 inches in diameter, 4 ft. or more in length.

PRICE: Type A, 4 Models: 16-in. diameter, $21,800; 20-in. diameter, $25,100; 26-in. diameter, $27,700; 30-in. diameter, $28,700. Type B, 12 Models: $12,460.

OPERATION: This mechanical-type barker consists of a steel housing which contains a rotating ring through which the logs are fed by four heavy rolls. A number of blunt tools, held within the ring, are forced against the log by air pressure to remove the bark. Logs are held from turning. Type A uses pneumatic pressure. Type B uses centrifugal force and lever arms to apply pressure to the tools. Power—Type A: 20 to 35 hp., Type B: 12 hp. rotor; 6 hp. conveyor. Maximum feed rates—Type A: 90 to 120 fpm. Type B: 60 fpm. Capacity—At maximum feed and 75 per cent efficiency: 5-inch average diameter logs—7 cords per hour. 11-inch average diameter logs—36 cords per hour. 15-inch average diameter logs—66 cords per hour. Crew—Type A: 1 man. Type B: May be operated without crew.

INSTALLATIONS: Southern Lbr. Co., Warren, Ark.; W. T. Smith Lbr. Co., Chapman, Ala.; Champion International Co., Concord, N. H.; Marathon Corp., L'Anse, Mich.; Weyerhaeuser Tbr. Co., Longview, Wash.; Fordyce Lbr. Co., Fordyce, Ark.; Gurdon Lbr. Co., Gurdon, Ark.; W. S. Fox & Sons, Pine Bluff, Ark.; Urbana Lbr. Co., Urbana, Ark.; Barksdale Lbr. Co., Amity, Ark.; Woodard-Walker Lbr. Co., Heflin, La., and Ada, La.; Clancy Lbr. Co., Grayson, Ala.; Springhill Lbr. Co., Springhill, La.; Bearden Lbr. Co., Bearden, Ark.; H. D. Foote Lbr. Co., Alexandria, Ala.; *Bosques De Chihuahua, S. De R. L., Chihuahua, Chih, Mexico; *Celulosa De Chihuahua, S. A., Chihuahua, Chih, Mexico; Prairie State Paper Mills, Inc., Joliet, Ill.

*On order—not delivered.

• • •

Soderhamn D-3 Barker

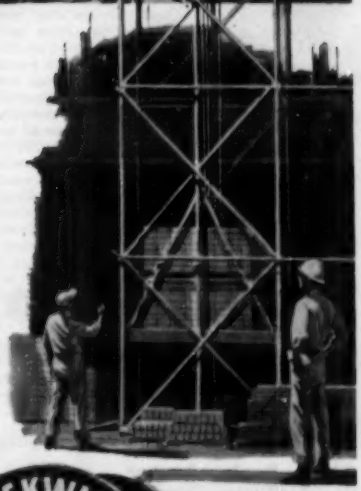
MANUFACTURER: Soderhamn Machine Mfg. Co., Talladega, Alabama.

MUSCLES OF STEEL
took the load off his back

Sweat and a strong back just aren't enough when it comes to meeting the stepped-up demands of modern construction work. Today's contractors and builders call on *muscles of steel*—sturdy wire rope—to lift and carry their heavy loads.

Supplying these *muscles of steel* to the giant that is American industry is our big job here at Wickwire—a job that has commanded our vigilant care and painstaking quality control for over half a century.

In the mines and the quarries. In the logging camps and the oil fields. On construction and highway projects. With the fishing fleets and in materials handling. Wherever wire rope is used, Wickwire Rope has earned an outstanding reputation for efficiency, utmost safety, long economical service and unfailing reliability.



every industry benefits from wire rope

WICKWIRE ROPE

CF&I PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

2487

Barker Review

DESIGN HIGHLIGHTS: Designed to bark softwood and hardwood sawlogs; minimum 5 inches, maximum 36 inches. Can be readily installed on log haul or log deck. Maximum feed speed 401 fpm. Logs up to 25 feet require 4 sets of balls used on feed works.

PRICE: No price information available.

OPERATION: The barking apparatus consists of a motor driven chain head or cutter head traveling on an overhead track and progressing forward as the log rotates and barking head is raised by a hydraulic cylinder. The traveling unit is power-chain driven by a hydraulic motor. Power can be electrical or gasoline. One operator is required. Standard feed works consists of 3 pairs of 18-in. balls, which support log being carried and rotated through machine.

INSTALLATIONS: (Includes units ordered but not delivered) Dargan Lbr. Co., Conway, S. Carol.; H. M. Walker Lbr. Co., Battleboro, N. Car; Darby Lbr. Co., Statesboro, Ga.; Gray Lbr. Co., Waverly, Va; Bradley Plywood Corp, Savannah, Ga.; Reynolds-Manley Lbr. Co., Savannah, Ga.; Hunt Lbr. Co., Ruston, La.; Potts Lbr. Co., Barhamsville, Va.; Wilner Wood Products Co.; Norway, Me.; Freeman Lbr. Co., Ahoskie,. N. Carol.

• • •

Nicholson Roto Barker

MANUFACTURER: Nicholson Mfg. Co., Seattle, Washington.

DESIGN HIGHLIGHTS: Designed to bark pulpwood, poles and sawlogs with diameters from 6 to 40 inches (modified to handle 60 inches), taking full three lengths. Company also manufactures Nicholson Peeler Log Barker.

PRICE: $50,000 to $70,000, including all equipment, drives and controls.

OPERATION: The Nicholson is a mechanical unit which removes the bark from logs by means of air-actuated abraders. Heavy, fluted rolls feed logs to the barking mechanism where hold-down wheels under air pressure keep them from turning during the operation. The abraders, contained in a ring, revolve about the long and closely follow its contour through the action of a pneumatic mechanism. The entire machine is controlled by push buttons. Power—150 hp. Capacity—Above 125,000 fbm log scale, depending on character of logs and feed rate (from 20 to 60 feet per min.). Crew—two men.

INSTALLATIONS: (Some on order) Cascade Lbr. Co., Yakima, Wash.; C. D. Johnson Lbr. Co., Toledo, Ore.; Long Lake Lbr. Co., Spokane, Wash.; L & K Lbr. Co., North Vancouver, B. C.; Twin Feathers Mill, Kamiah, Ida.; Hallack & Howard Lbr. Co., Winchester, Ida.; Kinzua Pine Co., Kinzua, Ore.; Crossett Lbr. Co., Crossett, Ark.; W. A. Belchar Lbr. Co.; Birmingham, Ala; M. B. King Lbr. Co.; North Vancouver, B. C., Southern Pine Lbr. Co., Diball, Tex.; Pope & Talbot, Inc., St. Helens, Ore. and Port Gamble, Wash.; M. B. King Lbr. Co.; North Vancouver, B. C.; Everett Pulp & Paper, Everett, Wash.

PLYWOOD BARKERS: Simpson Logging Co., Shelton, Wash.; U. S. Ply. Corp., Kosmos, Wash.; MacMillan & Bloedel, Ltd., Port Alberni, B. C.; Humboldt Plywood Corp., Arcata, Calif., Fir Mfg. Co., Myrtle Creek, Ore.; California Barrel Co., Arcata, Calif.; Sooke Lake Lbr. Co., Victoria, B. C.; Western Plywood Co, Quesnel, B. C.; Alaska Plywood Co, Juneau, Alaska; Umpqua Plywood Corp., Roseburg, Oregon.

• • •

Prentice Log Barker

MANUFACTURER: E. V. Prentice Co., Portland, Oregon.

DESIGN HIGHLIGHTS: Designed to bark saw logs: minimum log diameter, 12 inches, minimum length, 18 feet; maximum log diameter, 96 inches, logs up to full tree lengths.

PRICE: $47.500 (1953); complete installation, including floats for supporting machinery.

OPERATION: The Prentice is a mechanical, floating-cutter-head type machine which barks the log while still in the pond. The log is rotated and fed under the cutterhead by endless drive-chains passed around the log with a slight off-set to give forward motion. Complete operation is remotely controlled from a central console. Fine adjustment of cutting depth is possible, through hydraulic guide shoes which rest on the log surface. Refuse removal is made possible by a blower unit which draws material from cutterheads. Power as quoted—223 hp., total. Capacity—typical output 118,560 fbm per 8 hours. Crew two men. Modifications now being made include addition of moderately high pressure water jet which will be used to clean up little bark left on log after going through cutterhead.

INSTALLATIONS: Hammond Lbr. Co., Eureka, Calif.; Ivory Pine Co., Dinuba, California.

Peeler Type

Ederer Log Barker

MANUFACTURER: Ederer Engineering Co., Seattle, Washington.

DESIGN HIGHLIGHTS: Designed to bark peeler logs.

PRICE: No prices quoted. Each barker built to meet requirements of individual installations.

OPERATION: The Ederer barker is a mechanical scraper-type unit which consists of a hydraulically operated, heavy steel arm and scraper blade mounted on a combination infeed and crossfeed carriage. Cross carriage may also mount on a dado head. The entire unit works in conjunction with air-operated chucks which turn the log while either or both heads move the bark. The carriage traverses the length of the log on heavy bed rolls powered by two heavy conveyor chains. Air pressure —100 lbs. for most efficient operation of air chucks. 60 lbs. for scraper. Capacity—Adaptable to any size log. Crew—two men.

INSTALLATIONS: OREGON: Assoc. Plywood Mills, Inc., Eugene and Williamina; Brookings Plywood Corp., Brookings,; Cascades Plywood Corp., Lebanon; Gardiner Lbr. Co., Gardiner; Menasha Plywood Corp., North Bend; Springfield Plywood Co., Springfield; Georgia Pacific Plywood Co., Toledo; Roseburg Lbr. Co., Roseburg. WASHINGTON: Elma Plywood Co., Elma; Northwest Door Co., Tacoma; Peninsula Plywood Corp., Port Angeles; South Fork Logging Co., Aberdeen; Harbor Plywood Corp., Hoquiam; St. Paul & Tacoma Lbr. Co., Olympia; U. S. Plywood Corp., Seattle; Georgia Pacific Plywood Co., Olympia; Vancouver Plywood Corp., Vancouver. CALIFORNIA: Paragon Plywood Corp., Crescent City.

• • •

Globe Peeler Barker

MANUFACTURER: Globe Machine Mfg. Co., Tacoma, Washington.

DESIGN HIGHLIGHTS: Designed to bark peeler logs.

PRICE: Depends upon customer's needs. May be as low as $8,000 for small single-head machines, or up to $30,000 for large multiple-head machines.

OPERATION: The Globe is a mechanical barker manufactured in several types, either separate from, or mounted with, driving and chucking units of varying design as desired. 1. Rosser-head type (revolving knife head). 2. Scraper type with air cylinder. 3. Roller-head type with air cylinder. 4. Various combinations of other three. Log is lathe-mounted between two chucks, after which it it rotated and bark removed either by rosser head or forced off under compression or scraping action. Power—Rossing Head, 25 hp. Other—29½ hp. Capacity—Barking of average peeler block requires from 4 to 5 minutes, floor to floor. Spindle adjustment—108-inch maximum, both spindles. Swing and diameter—100-inch maximum, 14-inch minimum. Crew—two men.

INSTALLATIONS: OREGON: Astoria Plywood Co., Astoria; Woodard Lbr. Co., Cottage Grove; Cascades Plywood Corp., Lebanon; Edw. Hines Lbr. Co., Westfir, Ore.; Evans Prod. Co., Coos Bay; Giustina Veneer Co., Eugene; Kalpine Plywood Corp., Klamath Falls; Martin Bros. Box Co., Oakland, Ore.; Myrtle Point Veneer Co., Norway; Springfield Plywood Corp., Springfield; Weyerhaeuser Tbr. Co., Springfield; M & M Woodworking, Albany, Idanha, and Portland. WASHINGTON: Buffelen Mfg. Co., Tacoma; Elliott Bay Mill Co., Seattle; Everett Ply. & Door Corp., Everett; Harbor Ply. Corp., Aberdeen; N. Pacific Ply., Inc., Tacoma; Northwest Door Co., Tacoma; St. Paul & Tacoma Lbr. Co., Olympia; Three Rivers Ply. & Timber Co., Darrington; U. S. Plywood Corp., Seattle; Walton Plywood Co., Everett; Georgia Pacific Plywood Co., Olympia; West Coast Ply. Co., Aberdeen; Weyerhaeuser Tbr. Co., Longview, Wash; M & M Woodworking, Longview. CALIFORNIA: United States Plywood Corp., Shasta Ply. Div., Anderson; Calaveras Forest Prods. Corp., San Andreas; Calpella Plywood Co., Calpella; Fruit Growers Supply Co., Westwood; Humboldt Ply. Corp., Arcata; The Long-Bell Lbr. Co., Weed; Lund Ply. & Mfg. Co., Crescent City; M & M Woodworking, Eureka. IDAHO: Potlatch Forests, Inc., Lewiston. B. C.: B. C. Forest Products, Vancouver; Canadian Forest Products, Ltd., Vancouver; Canadian Western Veneer Co.

• • •

Bamford Premier Log Barker

MANUFACTURER: Premier Gear and Machine Works, Portland, Oregon.

DESIGN HIGHLIGHTS: Designed to bark large veneer logs. Series-50 will handle logs from 16 to 90 inch diameters and lengths from 78 to 110 inches.

PRICE: Depends on requirements of individual installations.

OPERATION: This mechaincal barker is of the lathe type in which the log is chucked between a head and tail stock that act as spindles for turning. Either a rosser head of a scraper head, or both, may be used in removing the bark. Tail spindle is air operated. Machine is of welded design thorughout. Power: Rossing Head—25 hp., 1800 rpm. Turning motor (Syncrogear) 10 hp., 100 rpm. Traverse motor (Syncrogear) 1½ hp., 68 rpm. Capacity—adaptable for largest peeler logs (3 to 5 minutes floor to floor). Crew—Operator and helper.

INSTALLATIONS: WASHINGTON: Georgia Pacific Ply. Co., Bellingham; Anacortes Veneer, Inc., Anacortes; Aberdeen Ply. Corp., Aberdeen; Stevenson Ply. Corp., Stevenson. OREGON: Lake Pleasant Ply., Harbor; Campbell McLean, Inc., Gold Beach; Coquille Ply., Inc., Coquille; Cottage Grove Ply., Cottage Grove; Lyons Veneer Div., M & M Woodworking, Lyons; Evans Prods. Co., Roseburg; Western States Plywood Coop., Eugene. CALIFORNIA: Kalpine Ply. Co., Anderson; Arcata Ply. Co., Arcata; Cal-Ore Co., Crescent City. B. C.: B. C. Forest Prods., Youbou, B. C.; B. C. Forest Prods., Victoria.

• • •

Weyerhaeuser Compression

MANUFACTURER: Designed and patented by Robert Pauley and L. A. McCanna. Patent assigned to Weyerhaeuser Timber Co. Non Commercial.

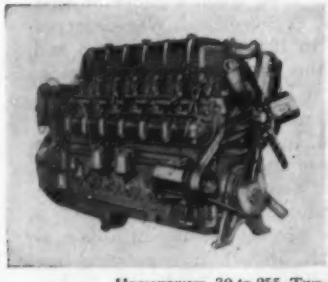
DESIGN HIGHLIGHTS: Designed to bark peeler logs. Recent tests prove it practical for use in barking redwood.

PRICE: No cost data published.

OPERATION: Mechanical barker using a lathe to rotate the log while a pressure head consisting of two rollers applies sufficient force to rupture the cambium layer and force off the bark. Pressure head is readily removed to allow use of varying size rollers. The head and supporting frame traverse length of log. Head Pressure—75 psi in a 12-inch diameter cylinder, 8,500 lbs. force. Capacity—Using 30-inch diameter logs, 15 fpm assumed feed speed, produces 207,000 fbm (approx.) per 8-hour shift. Crew—probably two men.

INSTALLATIONS: Plywood Plant, Weyerhaeuser Tbr. Co., Longview, Wash.; Springfield Plywood Plant, Springfield, Ore.

reduced to $16.32



Horsepowers, 30 to 255. Two-cycle. 2, 3, 4, 6-cylinder models. Speeds to 1800 rpm. Stationary, mobile, marine. Diesel-generator sets

We can't sell you just one. We will sell you 30 to 255 "horses" at the lowest price you can buy diesel power: $16.32 a horsepower for the 6-cylinder model.

If you know diesel, you know there is nothing else like it. A diesel will take on any job you might give to a gasoline engine — and do it for one-third the cost. Not only that, it is simpler to maintain.

Buyers no longer ask *whether* diesel but *which* diesel. Which will deliver the most horsepower for the money? The most horsepower per pound of weight? Which is the easiest to service?

All three questions have one answer: *the P&H Diesel.*

P&H Diesel Engine Division, Harnischfeger Corporation, Crystal Lake, Ill.

THE P&H DIESEL

lowest price per horsepower . . .
lowest weight per horsepower

SPECIAL FEATURE of Bellingham type hydraulic barker is nozzle turning in 360° circle. Trunnion wheels are 60 in. instead of 54. Inset, operator behind plastic window controls barker.

Changed Features

The following changes were made in the basic Bellingham type barker by Sumner Iron Works:

1. Transfer castings set alongside the wheels instead of straddling the rolls, allowing more clearance for the stringier peeled bark to reach conveyor.

2. As in previously built machines, the nozzle raises and lowers vertically and turns in a 360 degree circle but also tilts or swings approximately 30 degrees each side of the vertical line, enabling operator to direct water jet towards log at most efficient angle.

3. Drive on carriage for turning the nozzle is lowered on the elevator, concentrating weight near bottom of carriage.

4. Drive operating the nozzle tilt has safety clutch which slips if nozzle contacts the log. The tilting or sweeping feature also permits barking flat or odd shaped logs with ease and also sweeping the log decks of debris.

It also allows the operator to hit with the jet large pieces of bark held by the transfer chains in the barker so same is cut into small pieces like with a knife. This saves labor because operator is able to clean up trunnion rolls and barker area.

5. Trunnion wheels are 60 inches in diameter with a 5-inch face, contrasted to 54 inches and 4 inches, respectively, on previous models. Larger face keeps wheels from biting into freshly barked log.

RELATIONSHIP OF barker building to sawmill is shown in top photo, with mill at left. Bottom, view from the surge tank shows input side of barker building, built of redwood lumber.

Two Problems Solved

Hydraulic Union Lumber Co.

Two pioneer companies, the Union Lumber Co. at Fort Bragg, California and Sumner Iron Works at Everett, Washington, have chalked up another accomplishment. Combining their engineering talents and skills, they solved the problem of removing 3 to 12 inches of thick bark from big redwood logs before entering Union's sawmill, requiring about 500 logs daily.

With the installation of a new Bellingham-type hydraulic sawlog barker in April, the first unit of this type to appear in the redwood region, another forward step in conservation has been taken. More wood is saved for lumber and clean milling by-products are shipped to Masonite Corp. at Ukiah, Pabco and S. F. Bay area.

The Sumner engineered and built barker was installed at a cost of approximately $600,000, including the barker itself plus the pump, turbine, log handling equipment, building, dam and other equipment. Union engineers inspected 16 installations before deciding on the Sumner-Bellingham Type. This barker was designed to meet the special conditions involved in handling stringy-bark, king-size redwood logs.

Management of Union Lbr. Co. started thinking about the cost of unpeeled logs in 1944, when a paper on that subject was prepared by W. E. Sweetland. War-deferred investigations were begun in 1948 by the Research and Development Dept. under the direction of Ray Schreck.

Barker research began at Fort Bragg in 1951, when water readings were taken on the Noyo river to determine the amount available. In 1952, these observations were continued on both Noyo and Pudding Creek. Plans for the dam were drafted in September 1952, and orders for equipment went out about the same time.

As completed, the barker project consists of a dam at Pudding Creek, the 10-inch, 5493-ft. transite pipe line to the barker, a 10,000-gallon surge tank, the barker

(Continued on Page 76)

LOGS IN distance have been cold decked by Whirley crane. Discharge side of barker building, foreground, dumps logs into pond or on conveyor into sawmill for lumber production.

Principal Features

The basic Burnt River mechanical log barker, sawmill type, has the following engineering features:

A set of log turning and traversing wheels supported on a heavy fabricated steel frame.

Two wide face single barking heads.

Two narrow face double barking heads.

Two rotary brushes.

Air actuating cylinders, hydraulic power unit and motor with controls—all supported on machine frame, complete with an operating console on same frame.

Low power requirements, approximately 125 hp.

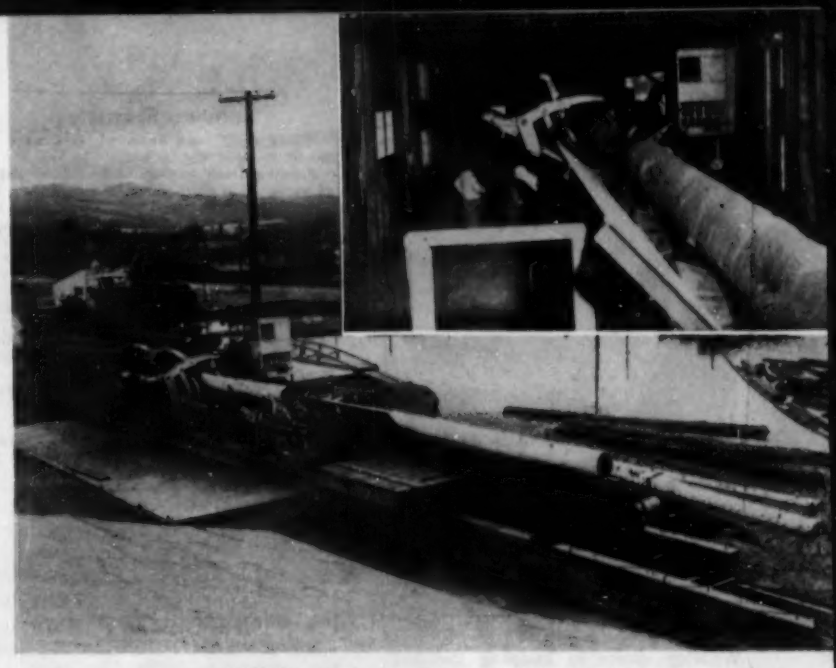
Structural steel base may be divided into sections for shipment and economical erection.

Bark removal is accomplished by a combination of cutting and rotary brushing, which cleans around knots and other obstacles.

Unit has longitudinal log feed, adaptable for any installation.

Three commercial variations of the sawmill type barker are available, capable of handling small, medium, and large logs.

The barker will also be manufactured in two sizes for handling pulp mill logs.



ORIGINAL Burnt River barker installation, developed by Burnt River Lbr. Co., Baker, Ore. Inset: outfeed end of barker after building enclosure. Log in foreground heading to pond.

By These Two Barkers

Mechanical

Burnt River Lbr. Co.

A mechanical log barker that removes bark practically and efficiently from a wide variety of timber species and log sizes and with low power requirements is a need for medium and small sawmills that have no water supply adequate to operate hydraulic units.

The Burnt River mechanical log barker, developed by the Burnt River Lumber Co. at Baker, Ore., has proved in numerous tests that it may be the answer to meet this industry problem. Designed at the mill by master mechanic Lee Gyllenberg, in cooperation with company president Anthony Brandenthaler, the original installation has been adapted for commercial production by Sumner Iron Works, Everett, Wash.

Two distinct types of the original mechanical log barker are now being designed and built. The first is a pulp mill unit, for handling up to ten foot pulp logs with diameters ranging from four to 24 inches.

The second unit is the sawmill type built to handle log lengths from 10 to 40 feet and with diameters ranging from 8 to 60 inches. A large sawmill type barker is now being completed for installation in a major California sawmill.

Under actual tests this mechanical barker has removed bark efficiently from pine, Douglas fir, hemlock, larch, white fir, spruce, cedar, alder and cottonwood. With more mills cutting "cats and dogs" of timber species, this versatility is an important requirement.

In operation, logs are lifted from the pond by a jack ladder and then are carried through the barker on trunnion wheels which rotate the log during its passage.

Bark is displaced by revolving side heads with angled teeth somewhat like helical gears, while rotating wire brushes located a few inches behind the heads remove the cambium layer.

(Continued on Page 78)

SIDE DELIVERY lift transporting logs from pond to live deck of Burnt River barker at Burnt River Lbr. Co., Baker, Ore.

HEAD-ON view (top) of original barker. Bot.: infeed end. Log rides on trunnions, angular position determines speed, direction of travel. Barking head and wire brushes are under hold-down arm. ANTHONY BRANDENTHALER, owner-mgr., at R.

DRIVE ON carriage for turning the barker nozzle has been lowered on the elevator.

building and its machinery, the log hauls to and from the barker and an Osgood model 1000 two and a half yard crane equipped with air tongs and a fish-tail boom. The latter unit aids the presently used rail-mounted Whirley crane in keeping the 240-foot log haul filled with logs.

Steam Turbine Used

Water is pumped from the dam at 60 pounds pressure and enters the Bingham pump at the barker from the surge tank at 10 pounds. A 1200 hp Elliot steam turbine drives the eight stage, Bingham centrifugal pump, equivalent to eight single pumps with runners or wheels for increasing the pressure through each stage. The turbine operates at 3600 rpm on 160 pounds of steam producing between 900 and 1200 hp. Condenser for the turbine requires 1300 gallons per minute. Part of the water passing through the condenser is used to lubricate the main trunnion rolls.

From the pump, water is piped to the carriage nozzle through a system of swinging pipes and swivel joints, where it is directed against the log as it revolves in the trunnions. The barker is supplied with 1000 gallons per minute of water at a pressure ranging from 1100 to 1500 pounds per square inch. The operator can control water volume and pressure as required.

A 40-ft. long redwood can be barked in from one to three minutes, compared to laborious hand peeling which required 15 to 45 minutes. The barker can handle logs from 10 to 48 ft. in length, with diameters up to 12 feet. The operator's control room is elevated above and at one end of the barking chamber, providing full visability.

The nozzle carriage is driven by a variable speed electric drive and the nozzle is raised or lowered electrically. The trunnions are driven by an electric motor through a two-speed gear box, permitting higher speed for smaller logs, and lower speeds for larger logs and split bolts.

Building Statistics

About 6500 man hours of work were required to build the barker.

Pudding Creek dam stores 65 million gallons of water. It is earth-filled, 350 feet long, has a 68-foot spillway and a fishladder 40 feet long and 7 ft. 4 in. wide. Height of water at adjustable gates of spillway is 3 ft., 9 in. A pump on Noyo river pumps water 1300 ft. to Pudding Creek to supplement water supply in early summer and fall.

280 piling were used as base for barker foundation.

780 cubic yards of concrete are in barker foundation and 365 cu. yds. in Pudding Creek dam.

Over 44,000 feet of 16/ to 250/000 Firex copper wire was used.

9200 pounds of welding rod was used.

Building housing barker is timber-framed and has redwood exterior, using 121,000 bd. ft. of lumber.

Log Chairs

Another innovation used for the first time on the log haul conveyors, both on the input and output side, are log chairs designed by Alex Rice.

The log chairs have four wheels on their under side, thus reducing friction and making for quieter and more efficient transportation of logs.

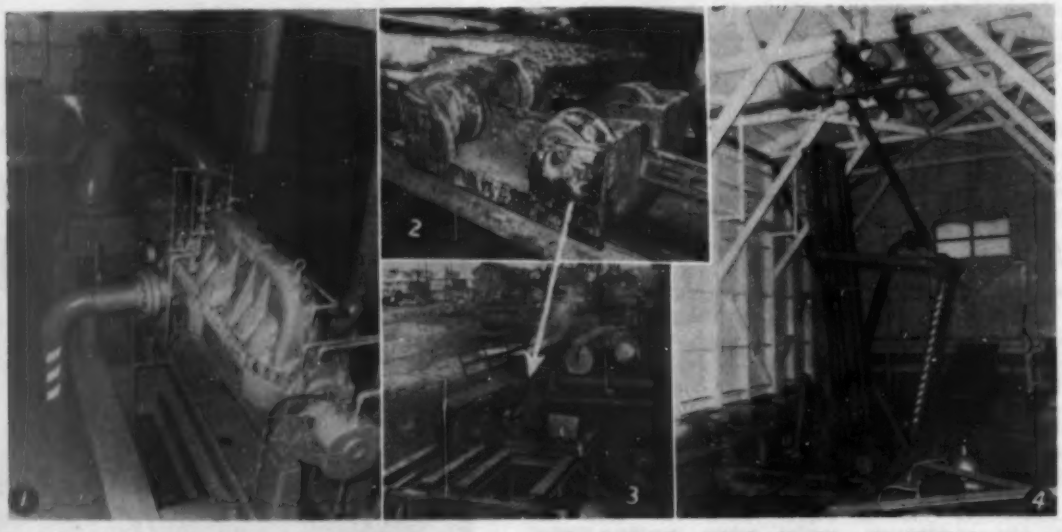
MOTOR DRIVES trunnion wheels through two-speed gear box. (Safety guard off.)

Cranes Feed Logs

Logs can be placed on the 240-foot log haul leading into the barker building either from the pond or from a cold deck. The rail-mounted Whirley crane, which unloads trucks and loads out railroad cars, serves from either trucks, pond or deck, while the Osgood model 1000 two and a half yard crane usually loads from the deck. The Whirley also is used to sort logs—both redwood and fir—for lumber, pulp and peelers.

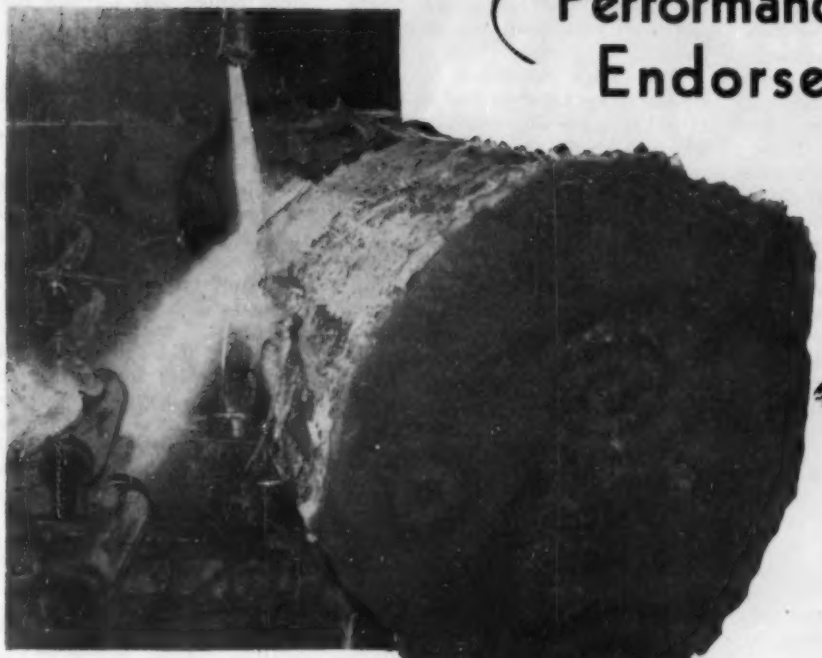
A 75 hp GE 1800 rpm motor, driving through a fluid coupling, operates the log haul. The operator in his house at the entrance to the barking chamber controls the Sumner log lifter, sawdust conveyor, log

(Continued on Page 78)



ELLIOTT STEAM turbine (1) drives eight stage Bingham pump. Closeup (2) of a log chair in use on incoming and outgoing log hauls. Input haul (3), driven by GE 75 hp motor through fluid coupling. Carriage for nozzle movement is shown in (4).

Performance Wins Endorsement!



The Union Lumber Company, Fort Bragg, California, a major Redwood operation, compared the performance of over sixteen different types of barking installations before selecting the Sumner BELLINGHAM-type HYDRAULIC LOG BARKER here shown debarking an 8' diameter Redwood log. (Note how the size of this log dwarfs the nozzle and water action.)

Sumner

BELLINGHAM-TYPE HYDRAULIC LOG BARKER

SUMNER BELLINGHAM-type HYDRAULIC LOG BARKER performance has proven its superiority over all other barkers . . . regardless of log species, size or irregularity of surfaces to be barked . . . including Redwood, Cedar and Eucalypti.

For PULP MILLS

LARGE	Handles logs up to 24' in length and diameters up to 72".
MEDIUM	24' lengths — 60" diameters.
SMALL	10' lengths — 42" diameters.

For SAWMILLS

LARGE	Handles logs up to 44' in length and diameters up to 10'.
MEDIUM	24' lengths — 60" diameters.

SUMNER IRON WORKS Since 1892
EVERETT, WASHINGTON

In Canada CANADIAN SUMNER IRON WORKS LTD. VANCOUVER, B. C.

Baker Review

Burnt River

(Continued from Page 75)

Heads Are Described

Log turning and traversing wheels are of cast steel, mounted in cast steel housings so arranged that same may be rotated or pivoted to provide proper feed or lengthwise log movement through or under the barking and brushing heads. These wheel assemblies of sufficient number to suit the log lengths desired to be handled, are arranged opposite each other to form a cradle for holding the logs while being barked.

A hydraulic cylinder controlled by the operator pivots the turning wheel assemblies. Drive for the wheels is by electric motor through a reduction drive to parallel shafts fitted with flexible or universal joints to allow pivoting of wheel assemblies.

Barking heads consist of two single heads and two double heads pivoted on the drive shaft. Drive from shaft to heads is through roller chain with adjustment provided in the ladder. The two single heads and two double heads are positioned opposite each other.

The double heads are arranged with a space between and mounted to utilize a walking beam principle, which allows the heads to bark around projections. Heads are operated by variable pressure air cylinders individually controlled by the operator.

The two brushing heads are mounted opposite each other and behind the barking heads. They are a large diameter rotary brush mounted on hinged ladders pivoted and driven from the barker head drive shaft. The control is also by variable pressure air cylinders individually controlled by the operator.

Hold down wheels are provided and controlled by variable pressure cylinders. Jump or lift rolls are provided to help handle crooked or swell butted logs through the machine.

All controls are mounted in a console within the operator's room which is part of the barker frame.

The Burnt River barker is to be built in the following sizes by Sumner Iron Works:

Pulp Mill Type to Handle "Farmer" Logs: 4 in. to 18 in. diameters, 8 ft. long; 4 in. to 36 in. diameters, 8 ft. long.

Sawmill type:

6 in. to 36 in. diameters, 12 ft. to 42 ft. lengths; 6 in. to 48 in. diameters, 12 ft. to 42 ft. lengths; 6 in. to 60 in. diameters, 12 ft. to 42 ft. lengths.

The sawmill type barkers, within the above range of log diameters, will be built to meet the log length requirements of individual mills.

Union Lumber Co.

(Continued from Page 76)

transfer chain, L-M cutoff saw, the log haul and the Sumner kickers to the log transfer chain.

Inside the chamber, the barker operator from his "perch" controls the transfer chains to and from the barker, the Sumner log stop and loader, Sumner trunnion rolls and nozzle carriage, Sumner log unloader to transfer chain, the turbine and pump.

Removed bark is conveyed to the boiler house for fuel. Water drops through screens to return through drains to the Pacific Ocean.

Barked logs proceed on transfer chain outside the chamber. They then can be kicked into the log pond, down a skid, or fed directly into the sawmill. An L-M Equipment Co. chain saw is used on the deck to buck logs to length.

Key men of Union Lbr. Co. having responsibility in the engineering and construction of this barker include: Ray Schreck, Jesse Tallman, plant maintenance superintendent; James Kennedy, chief engineer; Alex Rice, plant engineer; Otis R. Johnson, president; Russel Johnson, executive vice-president; John Gray, production manager; Orman H. Oak, director of safety.

Principal Equipment

Chain Saws
Two Model 150, 8-ft. bar. Supplier: L-M Equipment Co., Portland, Ore.

Glass
One-half-inch and ¾-inch plate. Supplier: Cobbledick-Kibbe Glass Co.

Hydraulic Power Unit
Supplier: The Rucker Co., Oakland, Calif. Used on two L-M chain saws.

Electric Supplies
Switches, wire, conduit, connectors, pole line hardware, thermostats, relays, starters. Suppliers: General Electric Co.; General Electric Supply Co.; The Electric Corp.; Westinghouse Electric Supply Co., Westinghouse Electric Corp.

Power Transmission Units
Suppliers: Western Gear Works; Link-Belt Co.

Barking Unit
Loaders, unloaders, trunnions, nozzle, carriage, nozzle tilting and hoisting mechanism, pipe swing joints. Supplier: Sumner Iron Works, Everett, Wash.

Log Kickers, Loaders
Made by Sumner Iron Works, supplied through Fred E. Barnett Co., Eureka, Calif. (These were used for other log hauls and the live log decks.)

Pumps
Bingham, 4 x 6 x 10, MSBHH, 8 stage. Supplier: Bingham Pump Co., Seattle, Wash. Fairbanks Morse, 6 inch, 50 hp, 3 phase, 60 cycle, 440 volts, 1800 rpm, at Pudding Creek Dam; 5 hp, 1 phase, 60 cycle, 220 volts, 1800 rpm, pumps 30-ft. head of water at 525 gallons per minute, at tunnel on Noyo River.

Steel Fabrication
Work done by Fair Mfg. Co., Sorocco Steel & Welding Co.

Poles and Piling
280 piling; 52 poles. Supplier: Chris Nicholas, Fort Bragg, Calif.

Turbine
750 k. w. Elliot steam turbine with direct drive to Bingham pump; turbine operates at 3600 rpm on 160 lbs. of steam producing between 900 and 1200 hp dependent on requirements of pump. Supplier: Utilities Mach. Corp., Cleveland, Ohio.

Chain, Roller Chain, Log Haul, Transfer and Sprockets
Fred E. Barnett Co., Eureka, Calif.; Chas. A. Fowler Co., San Francisco, Calif.; Link-Belt Co.; Portland Chain Mfg. Co., Portland, Ore.

What the Barker Means—

To Production

says **John Gray**, Production Manager:

Mismanufactured lumber resulting from redwood bark, causing the headsaw to "snake," will be eliminated.

The sawyer can see the log surface and saw lumber more accurately. A clean log on the carriage means less lost time in sawing the first board.

Edgermen will not be troubled by bark jamming the saw guides. Most sinker logs will be kept out of the pond.

Logs can be bucked to length after they are barked, permitting inspection of surface defects.

To Maintenance

says **Jesse Tallman**, Superintendent of Maintenance:

No more bark tangling in drive sprockets of main log slip to crowd the chain off the sprocket.

More life from head block skids, wheels and tracks.

Saws will stay sharper longer, cut better and last longer.

Sweepers and mill wrights will have a cleaner mill.

Pond dredging will be almost eliminated.

More wood for chips and less wasted.

To Safety

says **Orsman H. Oak**, Director of Safety:

A complete job of build-in safety has been provided.

There are numerous automatic controls and interlocking limit switches. Every possible machine guard has been installed.

Warning lights and whistles or bells announce starting or stopping of equipment.

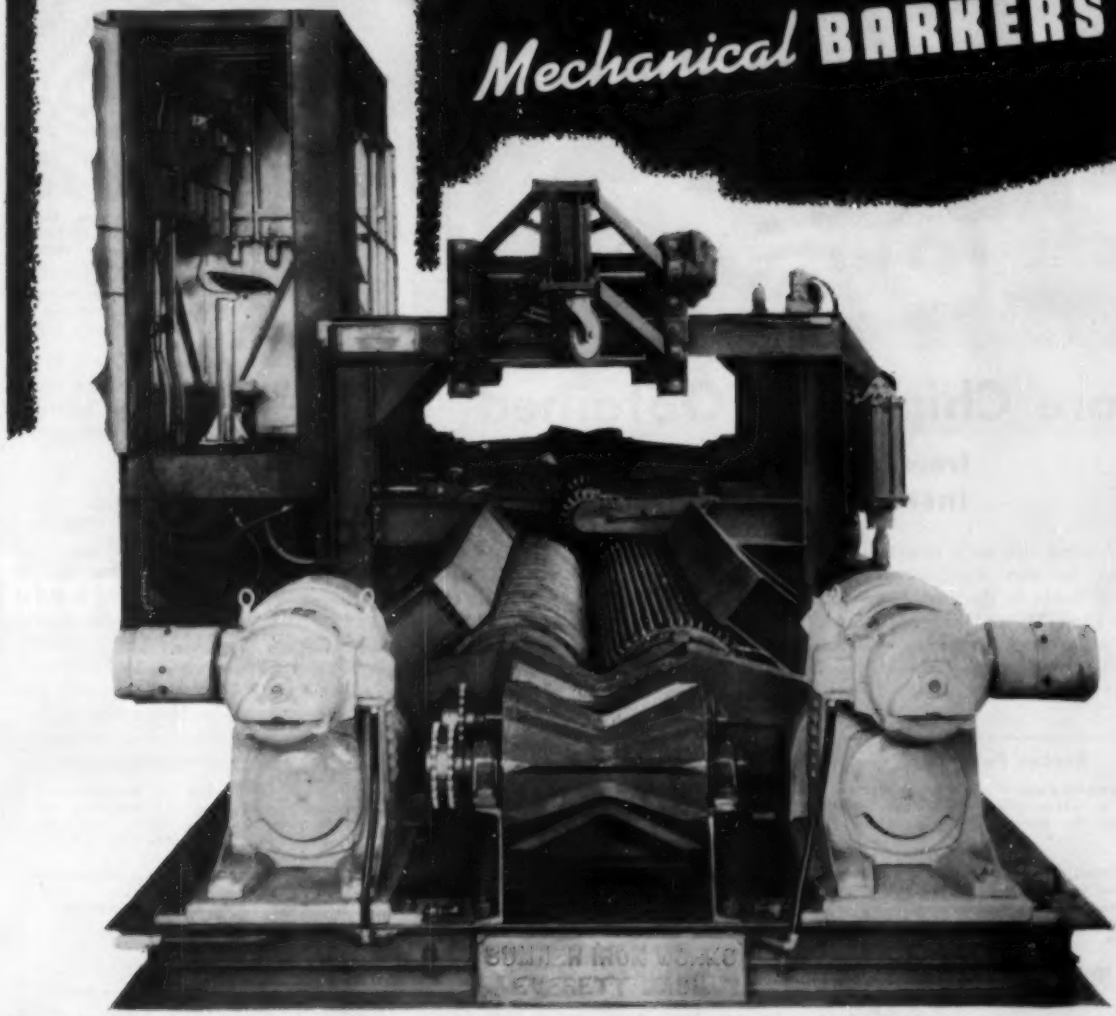
Mercury vapor lights flood inside and outside of building for safety and efficiency.

No more injuries sustained from fighting bark in machinery.

No more injuries from hand-peeling bark in the woods.

Sumner PRESENTS THE LATEST IN . . .

Mechanical BARKERS



BURNT RIVER MECHANICAL LOG BARKER

Here at last is an efficient and economical log barking device that requires NO WATER, and a minimum of power, yet effectively removes ALL THE BARK INCLUDING THE CAMBIUM LAYER from Pine, Larch, Fir, Spruce, Cedar, White Fir, Alder, Cotton-wood, Hemlock and Douglas Fir. . . . No other mechanical barker has equalled this outstanding performance.

Two distinct types of the Burnt River Mechanical Barker are now available . . . The PULPWOOD TYPE for small diameter 8' logs, the SAWMILL TYPE for large diameter, 12' to 42' logs.

Sumner has been building log and slab barking equipment, both mechanical and hydraulic, longer than any other manufacturer. . . . these years of experience and close contact with all phases of barking problems qualify us to speak with authority on the proven capabilities of the BURNT RIVER MECHANICAL BARKER.

Our newest development . . . the BURNT RIVER MECHANICAL BARKER has merited exceptional interest since it was first installed at the Burnt River Lumber Co., Baker, Oregon.

Further information on this Barker will be gladly furnished upon request.

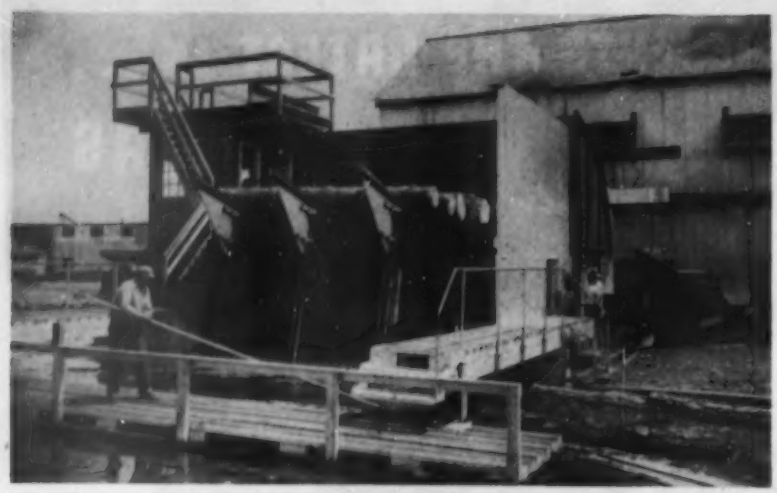
Designers and Builders of Pulp and Paper Mill, Sawmill, Boardmill and Shingle Mill Equipment

ESTABLISHED 1892

SUMNER IRON WORKS

EVERETT, WASHINGTON

In Canada: Canadian Sumner Iron Works, Ltd., Vancouver, Canada



OFFICIALS inspect slotted nozzle, top. Fr. L., WM. WALL, Harris; D. RICHES, Hansel; LEM PAULSEN, Harris Mills.

LOGS ARRIVE on live deck (L.) on American Mfg. Co. lift. Barker logs discharge to pond on unloading pan (above man's head).

More Chips Are Obtained

from new hydraulic trunnion barker installed at Harris Pine Mills

Among the very latest developments in the log-barking and chipping fields is the installation at Harris Pine Mills, Pendelton, Ore., which went into production during post July 4th start-up. This includes the first in-production model of Hansel Engineering Co.'s trunnion-type hydraulic log barker and a Rader pressurized chip conveying and carloading system.

Previously the Harris firm chipped 6 to 8 cars weekly from available clean wood. The current set-up is expected to increase the chip output to 30 to 40 carloads weekly from the Mill's 150M per day lumber cut, according to Manager C. J. Nagel. In addition to making more by-product wood suitable for converting into pulp chips, he anticipates improvements in sawmill production and increased saw filing efficiencies.

The complete barking and chipping systems were contract purchased from Hansel Engineering Co., with Harris installing both on sub-contract basis under direction of Sawmill Supt. Lem Paulsen. William E. Wall, resident engineer, installed the electrical and oil hydraulic systems. Hansel engineers participated in the installations.

The barker sets at the side of the sawmill's infeed end adjacent to the millpond. Operating one shift per day it provides bark-free logs for the mill's two-shift production of around 150 M feet per day. In trial runs prior to converting to in-line production, logs were being barked one every 40 seconds. A reduction in processing time to 30 seconds per log is expected as the operator be-

Barker Features

High-pressure pump is protected by mercoid switch on intake side which automatically cuts out the power on failure of water supply.

o o o

This barker, which required no additional personnel at the Harris mill, is considered by management to be economically suited to mills cutting from 30 to 75 million feet annually.

o o o

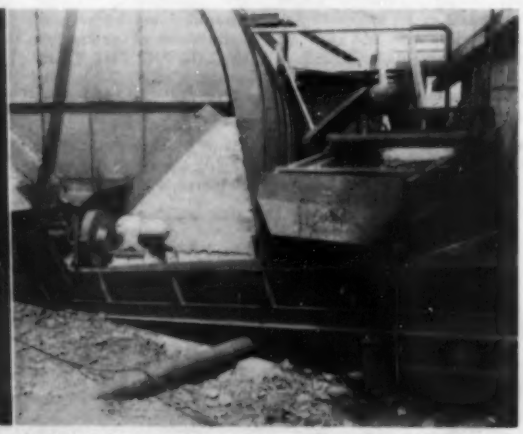
Harris Mill's barker is designed for logs 16 to 20 ft. long and 5 ft. or less in diameter.

Why Barker Was Chosen

Factors contributing to management's selecting, purchasing and installing this Hansel hydraulic trunnion barker with oscillating head were specified to THE LUMBERMAN as follows:

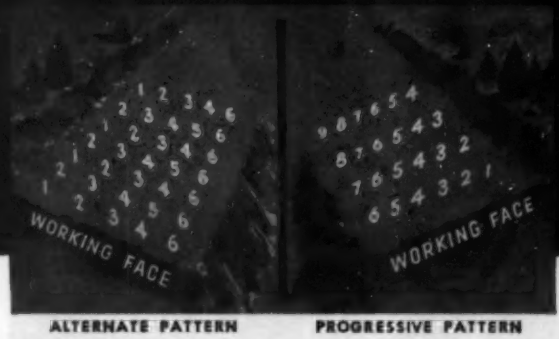
Quality of barking—"it does an excellent job of removing bark."
Comparatively low capital investment.
Low water requirements.
Does not require filtered water.
Simple disposal of water.
High volume production.
Low operating and maintenance costs.
Low horsepower requirements.

INFEED OF barking chamber. Trunnions down center; stop-and-loader, at left. Vickers controlled loading arm, in foreground; lift rail and unloading pan, in background.



CONVEYOR ACROSS foreground receives bark from deborking operation. Coarse bark arrives by conveyor; L., fines via Link-Belt dewatering screen, R., shown in action.

Throw controlled... breakage good



ALTERNATE PATTERN PROGRESSIVE PATTERN

A well placed, well broken final pile —like the one in the picture— tells the story of another successful ROCKMASTER® blast.

This side-hill cut is one of many that was blasted by the Morrison-Knudsen Co., Inc. and Ralph E. Mills Company through the rugged terrain of West Virginia for the new West Virginia Turnpike. By using a ROCKMASTER pattern the contractor obtained maximum breakage and controlled throw. The rock was blasted toward the up-hill slope . . . not scattered into the valley below.

The delays on the up-hill side of the slope were fired first, giving relief for the following rows. Since explosives force follows the line of least resistance, the general heave of the burden was up the slope toward the relief.

ROCKMASTER is the answer to any blasting problem where control of throw is a necessity, yet good displacement is needed for economical digging. For complete information on Atlas explosives and the ROCKMASTER Blasting System, ask your Atlas representative for a copy of the new Atlas Explosives Catalog.

ATLAS

ATLAS EXPLOSIVES

"Everything for Blasting"

ATLAS POWDER COMPANY,
WILMINGTON 99, DELAWARE

Offices in principal cities

SAN FRANCISCO PORTLAND
SPOKANE SEATTLE

PRESSURE PUMP assembly delivering 350 gpm to nozzle at 1600 psi. GE 450 hp motor direct connects with Pacific-Western speed increaser driving Ingersoll-Rand pump.

comes accustomed to the machine.

An American Manufacturing Co. log lift powered by 5 hp. G. E.-Pacific gearhead motor, lifts logs from the pond and deposits them onto live deck of the barker, also powered by 5 hp. G. E.-Pacific gearhead motor. From here logs go to the barker proper, controlled throughout by a Vickers oil hydraulic system powered by 15 hp. G. E. motor which drives a two-stage vane-type Vickers pump. This hydraulic system has 800 to 900 psi. operating range, with 1200 psi. maximum.

Safety Features on Chip Conveyor

Mercoid switch interlocks, which will open circuit on pressure rise in airstream conveyor, protect the chip conveyor system against plugging and overloading. In case of momentary overload in the conveyor pipe, the feeder and chain conveyors kick out but the compressor continues to operate. If the line clears itself the stilled feeder and conveyor reactivate automatically. If the line doesn't clear, the blower also kicks out and all three components have to be restarted manually.

The supply conveyor (leading to chipper) and chipping operations are also interlocked electrically to prevent start-up of the conveyor until chipper reaches full speed.

Electrical Equipment

Installation standardized on G. E. and G. E.-Pacific gearhead motors, all 440-volt except 2300-volt main pump motor.

• • •

Pressure pump motor drives through Pacific-Western right-angle speed increaser of 1750 input and 4450 output to pump.

• • •

Across-line starting on motors powering main pump and chipper.

Five Pairs of Trunnions

A log, in moving from live deck to trunnions on which it rides during debarking process, is removed from deck chains by stop-and-loader which rolls the log onto two loading arms. As the stop-and-loader is activated, the loading arms move upward to receive the log at about same level as when in stop-and-loader. Although the loading arms rise rapidly, rate of descending speed is automatically limit-controlled by Rivett valves in the hydraulic system, to lower log smoothly onto the trunnions.

The trunnion assembly consists of five pairs of two each. Main bearings are Timken Roller Bearing. All five components of a series assume the same angular position, each of the two series positioned by a Vickers cylinder of 9 in. travel and the two cylinders interconnected so the two sets of trunnions maintain complementary pitch angle to each other.

These ten 28 in. diameter trunnions have individual drives consisting of 3 hp. G. E. motor driving through Twin Disc fluid coupling to a Falk reduction gear which connects with the trunnion by chain drive to turn trunnions at 45 rpm. Periphery speed of trunnions and logs are constant. Angular position of the trunnions controls the log's rate of longitudinal travel, either forward or backward.

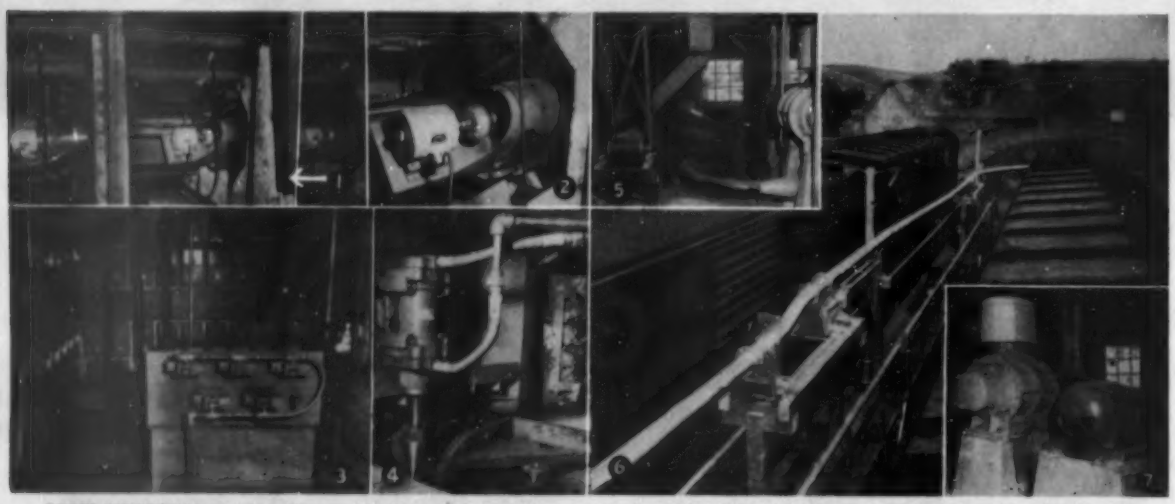
HANSEL 66-inch horizontal feed-vertical discharge 8-knife chipper is powered by 585 rmp. across-line starting 150 hp General Electric motor, shown at right.

Hydraulic Cylinders Used

A single nozzle head, with 4x.050 in. slotted port, directs water under 1600 psi. pressure down on the log at an angle of approximately 50 degrees to axis of the log. This nozzle sets above and ahead of front end of logs entering the barking chamber. A 2 hp. G. E.-Pacific gearhead

Vickers Oil Hydraulics on Barker

Vickers oil hydraulic system for control functions on Hansel trunnion-type hydraulic barker includes: 2-stage vane type pump driven by 15 hp. G. E. motor; 90-gal. oil reservoir; hydraulic accumulator of inert gas chamber class; 4½x16 in. log stop and loader cylinder; two 4x18 in. log loader-arm cylinders; two 6x6 in. pan tilt cylinders—all controlled by solenoid operated valves actuated by foot switches at operator station; one 6x12 in. jump roll cylinder; a 2½x54 in. nozzle vertical positioning cylinder; two 4½x9 in. trunnion rotation cylinders—all controlled by hand-operated valves in operator's control panel.



THREE INDIVIDUAL trunnion drives in (1) General Electric 3 hp motor (2) powers trunnion through Twin-Disc fluid coupling, Falk gear reducer, chain drive. In foreground (3) is Vickers hydraulic unit and reservoir; background, control panel for the 440-volt equipment. In (4) is the Vickers hydraulic cylinder controlling the angle position of one trunnnion set.

RADER ROTARY feeder (5) receiving chips from the Link-Belt vibrating screens, feeds to 550-foot pneumatic line, which conveys chips by airstream from the Sutorbilt single-stage 12 x 20 compressor, at right. Loading end of Rader system (6) loads into closed cars. The Sutorbilt compressor (7), driven by General Electric motor, provides 6 psi airstream.

motor laterally oscillates the nozzle-head 191 strokes per minute by eccentric-connecting rod hook-up.

Thus the penetrating fan-shape water jet rapidly swipes back and forth along the log as it progresses on trunnions beneath the nozzle which is vertically positioned hydraulically to fit any size log up to 5 feet diameter—capacity of the barker.

As lead end of a log in the barker progresses beyond last set of trunnions, it moves over a jump roll (driven by 5 hp. G. E.-Pacific gearhead through Hilliard clutch and positioned by Vickers hydraulic cylinder) onto an unloading pan. Two opposed connected Vickers hydraulic cylinders activate the pan to discharge bark-free log back into the pond.

Two-way unloading from the pan facilitates segregating the logs by species. The jump roll assists odd shape logs through last stage of barking, deflects front of logs upward to clear unloading pan and rapidly removes logs from barking area after they clear the nozzle.

A Link-Belt chain conveyor at bottom of barking chamber, running

(Continued on Page 117)

Water Supply

The barker operates on approximately 350 gallons per minute, all pumped from and returned to the pond without filtration. Water transport facilities in the circuit consist of three Ingersoll-Rand 350 gpm. pumps. The first one, a 15-ft. head supply pump suspended in the pond, supplies water to the pressure pump. The supply unit's intake is coverad by a 60-mesh screen and a ¼ in. heavy duty screen surrounds pump and intake as a guard for the whole assembly.

Just prior to reaching the main or pressure pump the water passes through a 60-mesh cylindrical screen 2 ft. long by 10 in. diameter. This pump, powered by 450 hp. 2300-volt across-line starting 1750 rpm. G. E. motor direct connected to Pacific-Western right-angle 1750 to 4450 rpm. speed increaser, delivers 350 gpm. 3465 ft. head to nozzle at 1600 psi. A mercoid pressure switch on suction intake of the high-pressure pump automatically cuts off power to the unit in case of supply failure.

The third I-R pump takes water from the barker sump, into which barking water and small bark particles drain from barker hopper through ½ in. perforations, and delivers to a 4x8 ft. Link-Belt dewatering screen. The water runs through ¼ in. vibrating screen and channeled into a 6 in. pipe directing it back into the pond by gravity flow.

All high pressure flexible hoses were furnished by the Thermoid Company. Piping was by Seattle Plumbing Supply Co.

HANSEL ENGINEERING COMPANY, INC.

Is proud to have played a major roll in the design and supply of equipment for many barker installations in the Northwest.

Our policy is to offer the industry the highest grade equipment and engineering possible in keeping with the requirements of the individual mills. Each barker installation receives careful attention to see that it suits the needs of the customer and will give him long trouble-free life.

Our latest barkers includes the Two-Arm Barker for low cost installation and automatic operation; and the Trunnion Barker for complete flexibility and low power consumption. Under test is a new Mechanical Barker for small mills.

Write us for details on our barkers and engineering services. An engineer is available to visit your mill on request.

HANSEL ENGINEERING COMPANY, INC.

1500 Westlake Avenue North • Seattle 9, Washington

***In Canada:* 1637 West Broadway, Vancouver, B. C.**

Nicholson ROTOBARKER

debarks up to 130 feet per minute

The new Nicholson Rotobarker gives you from thirty to one-hundred thirty feet per minute of smooth, perfectly clean logs of eight to seventy feet. Efficiently handles up to five foot diameters. This mechanical Rotobarker saves money, saves time, saves labor.

Proper cleaning reduces wood loss and extremely low horsepower requirements provide new savings. Also this amazing debarker is operated by only one man, with maintenance by your millwrights.

CHECK THESE ADVANTAGES

- ✓ Specially designed and adapted for your requirements.
- ✓ Lineal log feed rates of from 30 to 130 ft. per minute.
- ✓ Log lengths from 8 to 70 feet, diameters 4" to five feet.
- ✓ Chain bed log feed with log guiding wheels.
- ✓ Very low horsepower requirements.
- ✓ Proper log cleaning for all pulping processes.
- ✓ Dry, burnable bark by-product.
- ✓ No water solution problems.
- ✓ Heavy duty, rugged construction.
- ✓ Minimum wood loss or log damage.
- ✓ May be mounted directly in log haul, with debarking ring removable from log path.
- ✓ Bark removal by air powered scraper blades which rotate around the log. The log does not revolve.
- ✓ Maintenance by your millwrights, only one man to operate debarker.
- ✓ Driven by any motive means.
- ✓ Proven in operation on all species including winter-cut old-growth coast fir.

BUILT AND SERVICED BY THE LARGEST MANUFACTU
OF MECHANICAL BARKERS IN AMERICA.

Nicholson Manufacturing Company Inc.

Designers and Builders of Production
Log Barkers • Sash & Door Machines • Trim S

Offices and Plant:
5416 14th Avenue Northwest, SEATTLE 7, WASH.

SHOWN IN action is Nicholson's largest installation to-date, a 60-inch mechanical Rotobarker at C. D. Johnson Lbr. Co., division of Georgia-Pacific Ply. Co., Toledo, Ore.

It's A Barge-Mounted Barker

for C. D. Johnson Lumber Co. which has installed a mechanical unit

Indicative of potentials for adapting barker installations to needs peculiar to individual plant operations is the barge-mounted mechanical Rotobarker installed by Nicholson Manufacturing Co. at the C. D. Johnson Lumber Co., division of Georgia-Pacific Plywood Co., Toledo, Ore. This barker, to date the largest Nicholson unit, inaugurated production late last April. It barks logs for the company's sawmill and plywood plant.

Although it's management's plan to bark all logs for the Toledo operation (except those too large to go through the barker), this had not been fully accomplished at press time as a result of the coastwise strike which began before the machine and personnel became completely adjusted to the job. However, logs were successfully barked for both sawmill and plywood plant even though the barker had not assumed 100 per cent two-shift production before the strike occurred.

The barking component, a 60-in. Nicholson mechanical Rotobarker installed for debarking 650,000 bd. ft. of logs per day on 2-shift (16 hrs.) operation, consists essentially of a ring containing five round-edge adjustable-position blades revolving around the logs feeding through center of ring at infinitely variable rate up to 100 lfpm. An air cylinder behind each debarking tool provides pressure to maintain constant and intimate contact of blades with the log to remove both bark and cambium from the wood. The barking ring is vertically positioned by a Vickers oil-hydraulic system for centering of logs.

The barking ring is driven by a 50 h.p. direct current motor supplied by C. Kirk Hillman Co. This motor is fan cooled and supplies power for the actual barking operation. The bark by-product, according to the power house engineers, is an excellent fuel, giving a hot fire.

Logs are segregated prior to reaching the barker. Consequently, processing can be confined to Douglas fir or spruce-hemlock at any one time. Except for this segregation logs arrive as camp run. All logs go through the barker except those ex-

Why Barge-Mounted?

Plant Manager ROBERT E. FLOWERREE gives these reasons for mounting the barking facilities on a barge:

- Eliminates considerable of the vibration problems characteristic of some other types of mounting.
- Makes for minimum log handling handling facilities to and from barker.
- Provides means for extensive log sorting.

The company also has years of experience in operating barges and has facilities for handling them—maintenance, repair and transportwise. The 8 x 32 x 110-ft. barker barge (one of 17 barges owned by the organization) is expected to go ten years without drydocking. Then the company will move the unit onto its own bargeways for patching, painting and/or rebuilding.

Another advantage in having the barker barge-mounted: it can be moved to a different position of location if desired. The unit now sets in Yaquina river waters between the sawmill and plywood plants. Although the water level varies 10 ft. with the tides, debarked logs discharge back to the pond area by a vertical drop of constant length. If the barker were land or piling mounted, the drop distance would very constantly.

BARK-FREE logs pass from barker ring (left of control house, center) to outfeed rolls for segregation. Log pockets are: small fir logs for sawmill, foreground; peeler blocks, far right; large fir logs and spruce-hemlock, left of barge. Right photo: barge-mounted Nicholson barker surrounded by log sort pockets. Logs enter barker via bullchain at right.

Hilt Division of Fruit Growers Supply Company, Hilt, California, use chain-driven Sterling logging trucks—with Fuller 4-B-86 Main Transmissions and Fuller 3-J-92 Auxiliaries—to give them top performance for adverse grades and heavy loads.

Leading Truck Manufacturers Standardize on Fuller Transmissions

. . . for Fuller Transmissions have *proven* themselves in all types of on-and-off highway service, where load-and-road conditions are the toughest. Outstanding performance and *customer satisfaction* has created such a demand that leading truck manufacturers have *standardized* on Fuller Transmissions.

Famous "extras" that mean longer wear life, quiet operation, easy shifting are: . . . crowned gear teeth that reduce load concentration . . . offset mating gears to limit load concentration.

More than 110 different models are available, for trucks from 100 to 400 hp, engines from 330 to 1440 cubic inches . . . there is a Fuller Transmission *designed* with your job in mind . . . ready to help you move more, *for less.* Check with your local truck dealer for the *right Fuller* Transmission for your job.

where horsepower *really* goes to work

Fuller TRANSMISSIONS

FULLER MANUFACTURING COMPANY (Transmission Division), KALAMAZOO, MICHIGAN

Unit Drop Forge Division, Milwaukee 1, Wisc. • Shuler Axle Co., Louisville, Ky. (Subsidiary) • Western Dist. Branch (Sales & Service, All Products), 641 E. 10th St., Oakland 6, Cal.

Performance, Power and Personnel

PERFORMANCE:

The Nicholson mechanical Rotobarker installed at C. D. Johnson Lumber Co., Toledo, Oregon is designed to bark about 650,000 bd. ft. of logs per day in two eight-hour shifts. It handles logs up to 60 inches in diameter in lengths from 14 to 54 feet.

POWER requirements for this performance are:

Barker ring	75 hp.
Feed drive	40 hp.
Air compressors (2 of 75 hp. each)	150 hp.
Conveyors	40 hp.
Oil hydraulics system	25 hp.

PERSONNEL requirements are:

- 2 barkermen
- 2 slipmen
- 2 boom men
- 1 oiler-millwright
- 1 clean-up man

ceeding size characteristics which can't be processed in this machine.

Hold Down Rolls

From the tidewater pond logs move up a log haul to the first roll case and subsequently are transferred laterally by air-operated lift skids to the infeed rolls taking log to and through the barking ring. A set of four hold-down rolls at each side of the ring overcome tendencies for the log to turn as result of the debarking process. Hanna air cylinders control position and thrust of the hold-down rolls.

Bark-free logs emerge onto outfeed rolls, the start of the separation system. When running on spruce and hemlock, the logs are removed from outfeed rolls by lift skids and discharged over near side of barge into the pond by air-operated lift-skids.

Bark-free fir logs emerging onto the outfeed rolls go to any of three main discharge points as a means for segregation. Large fir sawmill logs (which are sawed on day shift) get the same treatment as outlined above for spruce and hemlock. Small fir logs (night-shift sawing) are transferred by liftskids from outfeed rolls to transfer chains leading across barge deck to a chain conveyor extending along full length of barge.

Air kickers discharge the small sawmill logs from the conveyor near the point of entry, discharging them over side to the appropriate sorting pocket of the pond. Peeler logs remain on the chain conveyor for transport to an L-M deck chainsaw which cuts them to appropriate peeler-block length. This saw, positioned between two sections of the conveyor, bucks the logs while they remain in the conveyor. Resultant peeler blocks are conveyed to discharge stations near end of the barge and pushed over the side by air kickers and subsequently rafted and towed to the plywood plant.

Chips High Quality

A chain cross-conveyor receives bark from the barker and delivers it to a 30-in. inclined belt conveyor connecting with the main conveyor, another belt of same width, transporting the material to a Diamond hog for conversion into hog fuel. The hogged bark is utilized as fuel in the company power plant.

Clean by-product wood of the mill is channeled through a Sumner 72-in. chipper and thus converted into chips to be loaded into rail cars for transport to the pulp mills. About the only solid by-product sawmill wood not converted into chips consists of the barky portion of logs too large to go through the barker.

LIFT SKID of outfeed roll casing powered by 16 x 24-inch Hanna air cylinder, one of 24 units installed at C. D. Johnson Co.

Separating species — kraft species (Douglas fir) and sulfite (spruce, hemlock)—for processing in the sawmill, not only keeps lumber separated but also facilitates chip sales for highest economic yield. Publishers' Paper Co., at Oregon City, purchases the sulfite chips and Longview Fibre Co., Longview, Wash., the fir.

Carl E. Braun, vice president and mill manager of Publishers' Paper, states that chips received from the Toledo mill have satisfactorily qualified for producing sulfite pulp.

The Pay-Off

Installation of the Nicholson Rotobarker has:

- **Increased chip shipments from five to 12-15 cars daily.**
- **More than tripled output of hemlock-spruce chips almost immediately.**
- **Reduced saw changes in the sawmill from 3 to 2 per shift.**
- **Reduced mill clean-up.**
- **Increased efficiency in the resaw plant.**

It is anticipated that volume and quality of lumber cut will be upped with continued operation.

(Photo: Lincoln County Leader)

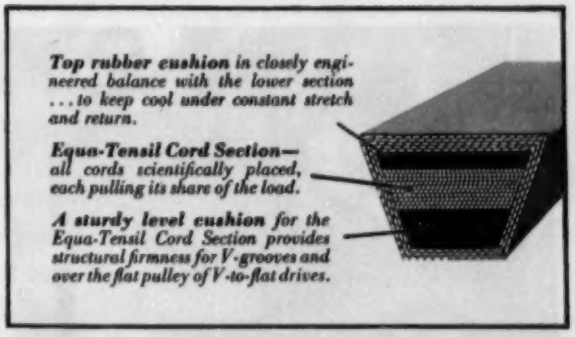
BARGE-MOUNTED Nicholson Rotobarker from the outfeed end. Two classes of debarked logs are discharged to pond on each side of barge. Covered inclined belt conveyor, left, receives bark from cross-conveyor, discharges to 30-inch belt to hog. Plywood plant is behind and to left of barker, sawmill is 100 yds. left of inclined conveyor.

OPERATOR IS shown at the controls of the Nicholson mechanical Rotobarker, which is designed to bark 650,000 board feet of logs in sixteen hours at the C. D. Johnson mill.

Handles MORE Horsepower... the new U. S. ROYAL SUPER-SERVICE BELT

Meet the *toughest* V-belt in the "U. S." Line. Delivering 40% more horsepower than standard belts, it also absorbs greater shock loads. Ideal where space is limited or where you want to decrease the number of belts required in order to use stock sheaves.

U.S. Royal® Super-Service is a "natural" for troublesome drives, especially heavy shock-load drives. High tensile strength, minimum stretch. All standard multiple sizes. Order from your distributor, or call any of United States Rubber Company's 25 District Sales Offices or write to address below.


***Top rubber cushion** in closely engineered balance with the lower section ...to keep cool under constant stretch and return.*
***Equa-Tensil Cord Section**— all cords scientifically placed, each pulling its share of the load.*
***A sturdy level cushion** for the Equa-Tensil Cord Section provides structural firmness for V-grooves and over the flat pulley of V-to-flat drives.*

A COMPLETE DRIVE SERVICE

MULTIPLE V-BELTS • F. H. P. V-BELTS • SHEAVES
FLAT BELTS AND BELTING • SPECIAL PURPOSE BELTS

"U. S." Research perfects it.
"U. S." Production builds it.
U. S. Industry depends on it.

US RUBBER

UNITED STATES RUBBER COMPANY
MECHANICAL GOODS DIVISION · ROCKEFELLER CENTER, NEW YORK 20, N. Y.

Hose • Belting • Expansion Joints • Rubber-to-metal Products • Oil Field Specialties • Plastic Pipe and Fittings • Grinding Wheels • Packings • Tapes
Molded and Extruded Rubber and Plastic Products • Protective Linings and Coatings • Conductive Rubber • Adhesives • Roll Coverings • Mats and Matting

HANSEL oscillating arm hydraulic barker goes to work on four ft. diameter log at Universal Lbr. & Box Co., Vancouver, B. C.

Oscillating Arm Barker

is installed by Universal Lumber and Box Corp., at Vancouver, B. C.

One of the latest types of hydraulic barker is the two-arm oscillating unit installed at the Universal Lumber & Box Co., near Vancouver, B. C., by Hansel Engineering Co.

The chief features of this barker are the oscillating arms located on either side of the log haul with the two main nozzles in the outer ends, and the controls which automatically adjust the speed of oscillation of the arms, the stroke of the arms and the speed of the log haul, to correspond to the diameter of log being barked.

The intelligence for these controls is supplied by a log gauge which also serves to hold down the logs as they cross the trajectory of the hydraulic jets. Controls on the Universal Lumber & Box Co. barker are hydraulically actuated and hydraulic drives are used to facilitate speed control. Manual overrides are provided on the log haul speed and the stroke change of the arms.

The travel of the jets is limited to the size of the log being barked, and both the speed of the log haul and the speed of the arm oscillation are controlled to make the most effective use of water and power.

Since the Hansel two-arm barker is mounted directly on the log haul without cutting the chain, the installed cost is lower than any other type of hydraulic barker.

In addiion to the two main side nozzles a small top nozzle is mounted on the log gauge to bark the top of the hard barking logs. This nozzle also oscillates from side to side and removes a swath of bark about 16 inches wide. On normal barking wood the top nozzle is not required.

CONTROL PANEL (left) where operator directs oscillating action of arm. Control buttons stop and start, override all but barker speed. Right, master automatic control box, with speed and stroke controls. Fafnir bearings, top. Denison drives powered by 25 hp Bapco motor actuate oscillating arm.

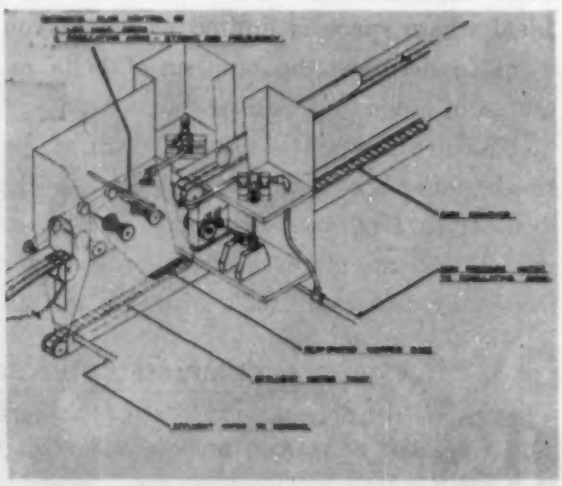


DIAGRAM SHOWS principal operating features of Hansel two-arm sawmill barker, which is also called the oscillating or wig-wag type. Important characteristic of the unit is that it can be installed directly on the log haul, thus making for less initial investment than for other barker types.

makes your trailer float along the highway

Everyone who operates a trailer has long desired one which would virtually float along the highway whether it was completely empty or heavily loaded.

Today that ideal trailer is available — Utility is proud to announce another sensational first — "RUBBERIDE" — here is a revolutionary new design that provides a velvety smooth transition from underloads to overloads—Utilizing an entirely new concept of the manner in which the springs are called upon to handle both loaded and empty vehicles, "RUBBERIDE" must be seen to be appreciated — that's why we suggest you call your Utility Sales Representative today. Ask him to show you this notable advance in trailer design — Let him tell you how "RUBBERIDE" will not only give you smoother riding on even the roughest of roads, but will enable you to materially reduce your maintenance and operating costs.

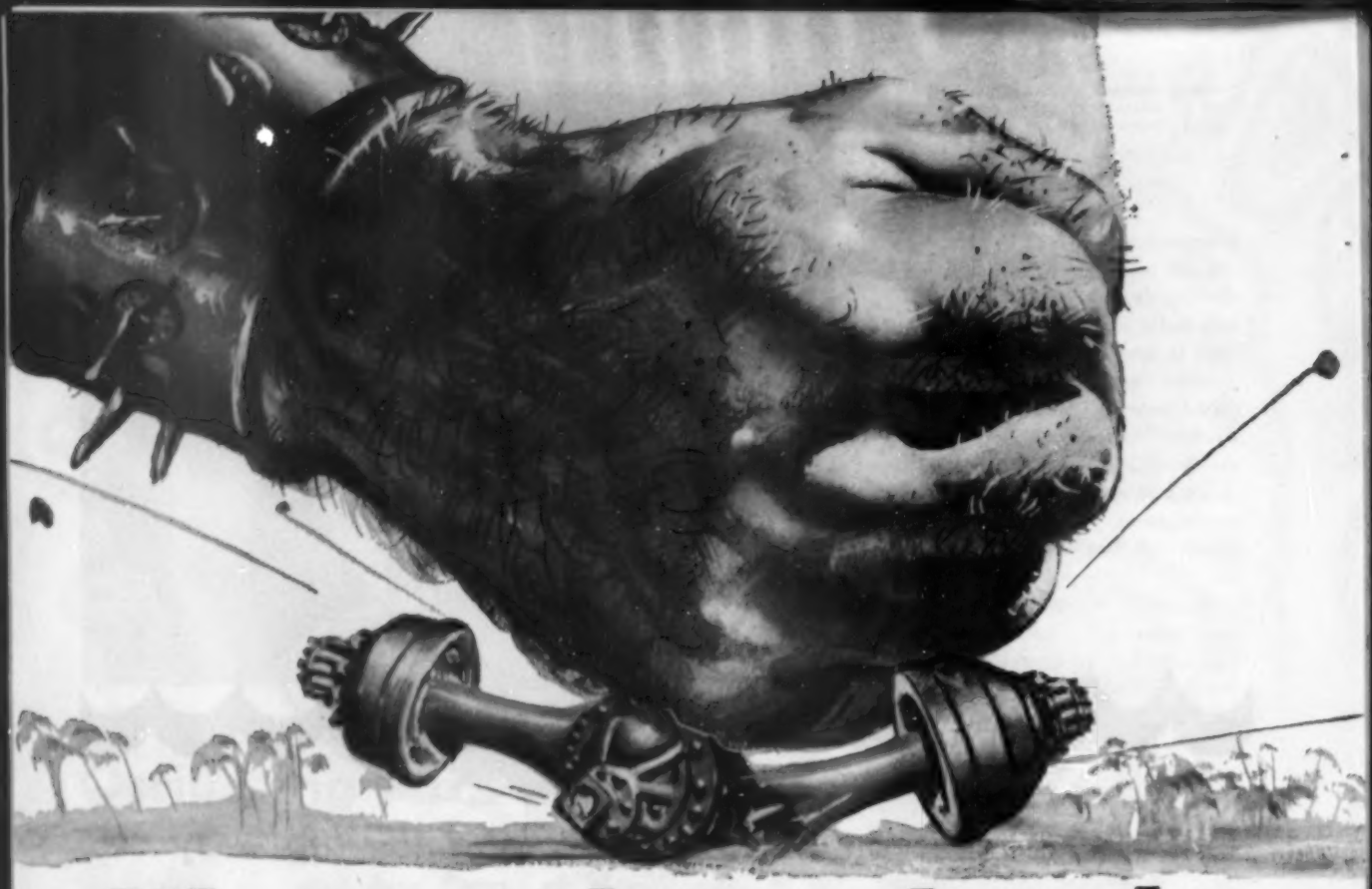
UTILITY "RUBBERIDE"

Remember you can always look to Utility to be first with the best!

UTILITY

UTILITY TRAILER MANUFACTURING CO.

Los Angeles 54, Calif.



We smash truck axles

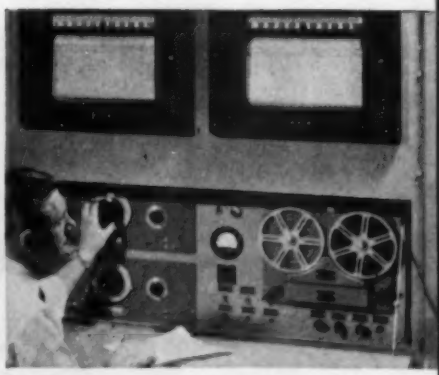
in the new Timken-Detroit indoor proving ground . . . and only Timken has it!

We twist, bend, jounce and jerk them. Duplicate every possible operating condition. Then toss in some "torture-tricks" of our own.

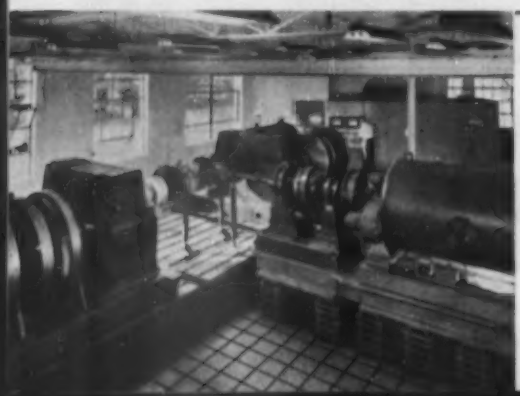
It's calculated destruction! But we know, and can tell you in advance, that a Timken-Detroit axle can take a murderous beating on the job.

Our "Torture Chamber" is a multi-thousand acre proving ground *capsuled into one room!* In it our engineers can put 50 years of experience to work . . . for you . . . experience gained in building axles for trucks, buses, trailers, farm machinery. Stock axles and gearing are subjected *indoors* to any *outdoor* operating condition—under scientific control and analysis.

The result? You enjoy longer axle life; less maintenance, repairs and downtime; lower operating costs, higher profits. Good reasons why Timken-Detroit axles are the choice of the leading manufacturers and owners.



This is our "Torture Tester." He gives axles and gearing the works in the "Torture Chamber." Above him are graphs showing speed and torque performance under any conceivable operating condition. Soft ground . . . twisting roads . . . long grades or fast highway speeds. With special dials, recorders, and electronic devices he actually *drives* the axle with scientific precision—*from his chair!*



How TDA proves axle quality in this "Torture Chamber"

We take an axle out of stock . . . then run a test like twisting the axle shaft 14°, backward and forward—36 times a minute, 24 hours a day, days on end. Or simulate a chuck hole shock every 4 seconds, 24 hours a day for months. Even "bend test" an axle housing for 1,000,000 cycles.

Now get more profitable truck performance than you ever dreamed possible! *Specify...*

TIMKEN-DETROIT 2-SPEED AXLES

because:

1. TDA two-speed double-reduction axles of Hypoid-Helical design provide both fast and slow ratios with two sets of "Man-Size" spur gears of liberal capacity. This simple design eliminates small, complicated arrangements of parts... improves performance... increases engine and gear life... cuts maintenance and repairs ... fewer service parts required.

2. You get INSTANT, easy shifts... fast to slow—or slow to fast.

3. TDA's wider range of gear ratios ... gives you combinations for any hauling requirement. For your present or new truck you can have a fast gear ratio for light loads everywhere—full loads on the level. Slow speed ratio for full loads on hills—for better pulling in "soft going." It all adds up to more profit per load and increased engine life.

4. Hypoid-Helical Gearing increases gear life...requires less maintenance. TDA two-speed axles give you a hypoid gear set in the first reduction ... pinion is bigger ... more teeth in contact, less load area per tooth. Larger pinion bearings and stronger ring gear. Torque transmitting capacity is increased. Only TDA offers a family of 7 basic axle capacities with interchangeable single speed, single reduction, single speed double reduction and two speed double reduction carriers.

5. Only TDA has "Torsion-Flow" forged axle shafts. This process makes grain structure conform to profile of shaft. Stresses are uniformly distributed throughout shaft —flange failures are practically nonexistent. Exclusive heat-treating formula gives tough, hard outer surface graduated toward center of shaft ... the ideal combination of axle performance characteristics. TDA "Torsion-Flow" shafts have exclusive guarantee of 100,000 miles or three years, whichever occurs first.

6. Only TDA hot-forged steel axle housings prove in tests to be pound for pound the strongest, most rigid ever built. Actually deflect 20% less than conventional housings of same capacity. Rectangular TDA housing shape provides maximum strength, uniform stress distribution, with minimum weight. Ask about "Life of Vehicle" guarantee.

to bits

TIMKEN Detroit AXLES

TIMKEN-DETROIT AXLE DIVISION
ROCKWELL SPRING AND AXLE COMPANY
DETROIT 32, MICHIGAN

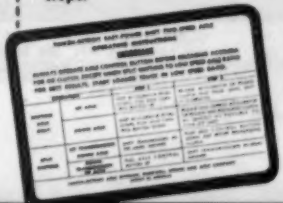
The Accepted D A Standard
TRADE MARK REGISTERED

"TORTURE-TESTED" to Save Money on the Job

WORLD'S LARGEST MANUFACTURERS OF AXLES FOR TRUCKS, BUSES AND TRAILERS

Plants at:
Detroit, Michigan
Oshkosh, Wisconsin • Utica, New York
Ashtabula, Kenton and Newark, Ohio
New Castle, Pennsylvania

FREE! Simple information card explains how Timken-Detroit Easy-Power Shift and Two-Speed axle operates when shifting axle only—or split shifting, in 2 easy steps.



Timken-Detroit Axle Division
Rockwell Spring and Axle Company
Detroit 32, Michigan

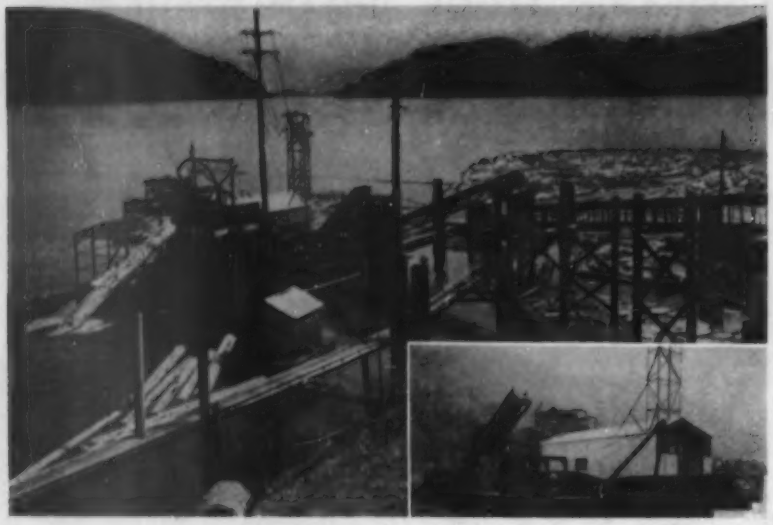
Please send me the *free information card* mentioned at left, explaining how the Timken-Detroit Easy-Power Shift Two-Speed Axle operates.

Name_____

Company_____

Address_____

City_____ State_____



GENERAL view of floating log barker. Barked logs shown dropping from outfeed rolls after passing through Hansel ring barker. Incline conveyor, center, feeds bark to Sumner hog. Conveyor (R.) carries hogged bark to fuel supply on shore. Inset, front view. Pumps in housed area, scaffold for power lines.

Floating Barker Is Answer

to special problem faced by B. C. Forest Products at Youbou

A big West Coast company is convinced that it pays to process clean, bark-free logs in its sawmills and plywood plants. British Columbia Forest Products Limited recently has backed up its faith in this operating theory with a $350,000 investment in a barking setup that is unique in the industry.

The company has completed installation of a whole log Hansel hydraulic barker on an all-steel floating pontoon barge to serve the log pond of its Cowichan Sawmill Division at Youbou on the eastern shore of Cowichan Lake. The barker will treat all logs used by the company's A and B sawmills and veneer plant at Youbou.

The idea of the floating barker is to facilitate maximum utilization of raw material, increase the flexibility of the over-all log handling operation and promote plant efficiency.

This is the second hydraulic barker installed by this company, the other being at its Victoria Division. It is unusual in that benefits to the sawmills are the main purpose of the installation without particular consideration for pulp mill use, as is customarily the case. One of the results will probably be elimination of refuse burning at the mill. With the mills handling only bark-free wood, and with adequate chipping facilities, leftovers will be virtually nil.

The barge on which the barker is set up is anchored in the pond, as the water at that location is too deep for piling.

Steel Barge Used

The steel barge, 40 x 80 x 6 feet, is made up in six watertight compartments so arranged that the structure is virtually unsinkable. Three compartments would have to be punctured before it would even become out of balance. Engineering, prefabrication and launching of the barge after assembly on the lake shore were accomplished by Victoria Machinery Depot.

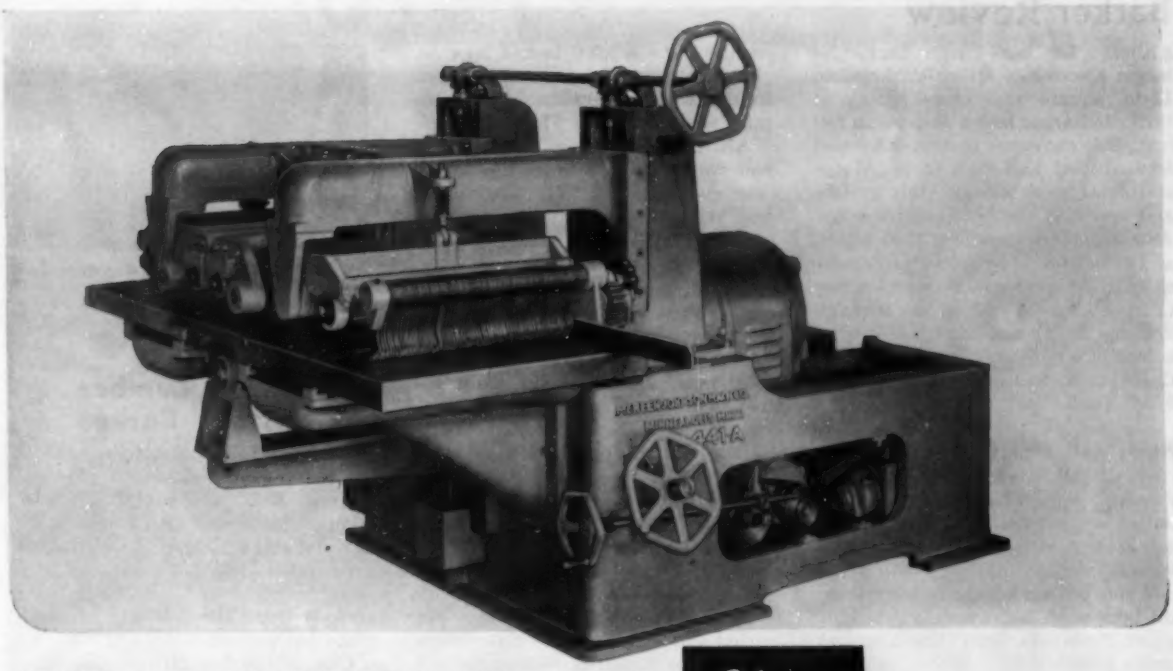
The barker chosen for this operation is a 60-in. ring barker designed by Hansel Engineering Co. of Vancouver and Seattle, Wash., built entirely by Vancouver Iron Works. It is mounted over a pit in the center of the scow.

Logs are delivered to the barker and returned to the water by two steel log hauls. Esco Ltd. provided the chains and chairs for the hauls which are driven by Vickers variable speed gear hydraulic units supplied by Galbraith & Sulley. Conveyors and sprockets were fabricated and machined by Victoria Machinery Depot.

A four-strand square link chain

INFEED side of the Hansel ring-type log barker mounted on a 40 x 80 foot steel barge anchored in the pond. ESCO log haul is driven by Vickers variable speed gear hydraulic units.

CLOSEUP of B. C. Forest Products' floating hydraulic barker shows log tumbling into the lake from haul roll after being barked. Above the log are strainer tanks and high pressure hose.



MEREEN-JOHNSON NO. 441A *New*

extra heavy duty GANG RIP SAW

MEREEN-JOHNSON has manufactured gang rip saws for 40 years. Power, speed and accuracy have always characterized M-J machines. This new No. 441A has all the features of previous models, with some important new ones added.

- Now *eight power-driven feed rolls*—two pair infeed and two outfeed. This is a double safeguard where utmost accuracy of production is required.
- 7200 RPM arbor speed puts extra power where it's needed.
- Vertical arbor adjustment simplifies bed plate removal.

If your production includes sheet materials, hardwood flooring, furniture core stock or wirebound boxes—it will pay you to investigate this big, rugged M-J No. 441A Rip Saw.

ONE-PIECE ARBOR BEAM

Exclusive with M-J is this beam mounting of motor, arbor and bearings in a single rigid unit.

MEREEN-JOHNSON MACHINE CO.
4401 LYNDALE AVE. NO. • MINNEAPOLIS 12, MINNESOTA

CUT-OFF SAWS	DOUBLE CUT-OFF SAWS	MULTIPLE CUT-OFF SAWS	GANG RIP SAWS
TENONERS	VENEER & PLYWOOD SIZERS & JOINTERS		RESAWS

Send For The No. 441A Bulletin

gathers the bark and discharges larger pieces into an inclined double 12-in. square link chain which in turn discharges into a 48-in. Sumner hog. The conveyor bottom is formed from drilled half-inch plate. Water and fines pass through this grizzly and run into the bottom of the pit. A trash pump handling 1200 g.p.m. at 10 lbs. and using a 10-h.p. Lancashire Crompton-Parkinson motor (British-made) supplied through Bepco, lifts water and fines to a screen built by W. S. Tyler Co., St. Catharines, Ont., supplied through Fleck Bros.

Nine Men Will Operate

A hinged square link conveyor conducts hogged bark to a shore conveyor where the bark finally becomes part of the fuel supply in an outside storage pile.

Water for the barker is taken from the lake at 50 lbs. pressure by a 1200 g.p.m. Byron-Jackson (Los Angeles) pump powered by a 50-h.p. 440-volt Bepco motor.

After passing through large filters built by Hafer Machine Works, Victoria, the water is delivered to an eight-stage Bingham pump driven by a 1250-h.p. at 3600 r.p.m. 2300-volt Electric Machinery Manufacturing Co. (Minneapolis) motor. The barker itself is driven by a 50-h.p. Lancashire motor.

Engineering for the project was carried out by Hansel Engineering Co. Project engineer for B. C. Forest Products was W. J. Connery; special consultants were electrical engineer W. L. Stevens of New Westminster, and F. W. Swift, consulting engineer, Portland, Ore., both working in close cooperation with D. E. Lane, manager of manufacturing for the company.

It is expected that the barker will handle some 300,000 feet of logs per shift, with eight or nine men engaged in the whole operation. When the mills were visited by The LUMBERMAN the company's veneer plant was working three shifts, the A mill was running one shift and the B mill two shifts.

Raceways Guide Logs

One of the interesting features of the Youbou log handling facilities is the provision of three stiff legs 400 feet long radiating from the barker location and anchored in about 100 feet of water. These serve as raceways to guide unsorted logs to the barker. At the terminal of the stiff legs there are 24-ft. cedar log floats from which the anchors are suspended. Anchors weigh 5 tons, with one-ton counterweight to allow for rise and fall of the lake level which sometimes varies as much as 12 feet.

After being barked, the logs are sorted and diverted to two raceways serving the A and B mills or formed into a bag boom to await handling by the veneer plant. This arrangement, somewhat unusual in detail, was largely designed by J. Frumento of the Head Office log staff, who is also responsible for getting the new system of handling logs into operation.

British Columbia Forest Products Ltd. owns and operates four sawmills —at Victoria, Vancouver, and Hammond as well as at Youbou, a plywood plant at Victoria, a veneer plant at Youbou and logging operations at Cowichan Lake, Renfrew, Pitt Lake and Jervis Inlet. Chips from Youbou are trucked under contract to the Harmac bleached sulfate pulp mill near Nanaimo.

President of the company is H. G. Munro; general manager, T. E. Burgess.

MANAGERIAL personnel of Cowichan Division, B. C. Forest Products. From left: W. J. CONNERY, project engineer; D. A. SAUNDERS, manager, sawmill division; D. L. ABERNATHY, assistant mgr.

Bridge Lumber Installs Barker

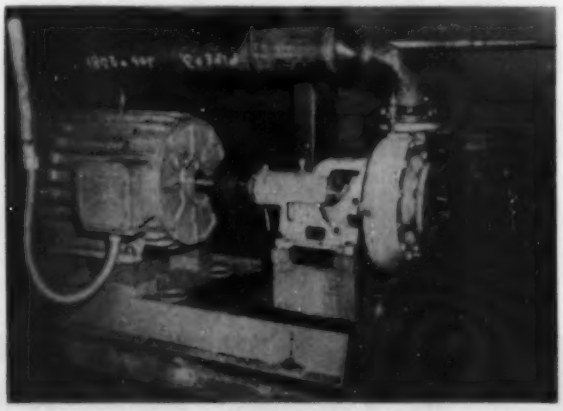
Bridge Lumber Co., with sawmill on Mitchell Island, south of Vancouver, B. C., is one of the smaller companies installing a hydraulic barking unit this year. A Bellingham type whole-log package model is being installed by Canadian Sumner Iron Works. The job will be complete by year-end.

One of the big British Columbia mills expected to adopt hydraulic barking this year is Canadian Western Lumber Co., subsidiary of Crown Zellerbach Canada Ltd., at Fraser Mills, where a major expansion program has been under way this summer.

A second hydraulic barker, of Howard Simons design, was installed this spring at Canadian White Pine Division of MacMillan & Bloedel, near Vancouver. This is a 60-in. unit somewhat similar in general operation to the original Simons barker installed there several years ago, which was used partly as a pilot plant for the Harmac pulp mill's barking setup on Vancouver Island. A turbine-driven Bingham pump, handling 1800 gallons of water per minute from Fraser River, serves the

(Continued on Page 117)

CONTROL panel (left) for Hansel hydraulic mechanism, foreground; for Comco electrical apparatus, beyond. Levers control transfers, ring barker motions. Right: 8 stage Bingham pump, driven by 1250 h.p. Electric Machine Mfg. Company motor.



WATER is taken from Cowichan Lake at 50 lbs. pressure by 1200 g.p.m. Byron-Jackson pump powered by 50 h.p. 440 volt Bepco motor, passes through large Hafer filters, then on to main pump. Barker is mounted over pit in center of scow anchored in log pond.

Trakloaders Efficient In Crotch Line Loading

For steady, day in and day out, crotch line loading at low cost, The Clover Valley Lumber Co., Loyalton, Calif. is one of many operators who have found the Washington Trakloader unexcelled. Their Model TL-15 Trakloader with long boom is shown above, loading ponderosa pine at an elevation of 6000′ in the Plumas National Forest. Production at two sides averages about 200,000′ per day for an eight to nine months season.

The Trakloader's combination of stability, fast travel speed, ample power with torque converter drive and long boom for closely controlled high loading gives pine operators exactly what they want. In addition to Clover Valley, other pine loggers in the same general area who have selected the Washington Trakloader for crotch line loading, include McCloud River Lbr. Co., McCloud; Fruit Growers Supply Co., Susanville; Dawson & Warner, Oroville; Sacramento Box Co., Sacramento; Cal-Ida Lbr. Co., Auburn and Dotters & McDonald, Springville.

●

Any owner will confirm from experience the outstanding performance of the Trakloader, the original and by far the most widely used mobile combination yarder and loader. Your nearest Washington dealer or the factory will be glad to discuss with you how to make your costs competitive by the use of the Washington logging equipment exactly suited to your operating needs.

ELECTRIC GUYLINE DRUMS ARE NEWEST TRAKLOADER FEATURE

Reversible, electric-driven, power guyline drums add to the efficiency in yarding and loading of the TL-15 Washington Trakloader recently delivered to the Wolf Creek Timber Co., Willits, Calif. These units are now available for all Trakloaders, greatly reducing time required to run out and tighten guys where frequent changes of setting are involved.

1500 6th Avenue South, Seattle 4, Wash.

WASHINGTON IRON WORKS

ELliott 1292

WASHINGTON IRON WORKS

KILN DRYING facilities (top) viewed from green end of pre-dryer. Outfeed end joins in-feed end of dry kiln this side of kiln office (at left). Bottom, removing charge from one of three double-track cross-circulation Moore dry kilns with a Hyster lift truck. Lumber, 4/4 shop and No. 3 clear, emerged at 8-10 per cent MC after 23 hours pre-drying and 71 hours in kiln.

Predrying Boosts Production

says Leonard Lundgren Lbr. Co. after trying out new installation

Although improvements continuously develop in techniques and equipment components in the field of kiln drying lumber, operators would like to increase kiln output and still maintain quality without an undue increase of costs.

Many techniques have been tried, some resulting in shaving costs in one or more production phases. Others have added to production output without a corresponding cost increase. All of these accomplishments contribute to the efficiency of the organization concerned and improve the industry's general position.

A practice recently inaugurated at an Oregon pine mill shows results which indicate unusual possibilities throughout the ponderosa pine field. Furthermore, the system should be readily adaptable to considerable of the softwood lumber industry.

The Leonard Lundgren Lumber Co., at Bend, Ore., has increased output of seasoned lumber from its three double-track kilns 50% or more by adding a pre-dryer unit ahead of the kilns and processing each charge here before it enters the kilns. This whole supplementary system was constructed for the price of one additional kiln.

According to Don E. Harpel, Lundgren's dry kiln superintendent who developed the pre-dryer, the monthly kiln production jumped from 1.2 million feet to 1.9 million feet following addition of the new unit. Furthermore, the increase resulted in some perceptible product improvement.

The pre-dryer section added at green end of the kilns is of corresponding width and 6 ft. longer than the kilns. As a kiln charge is removed it is replaced by a like charge from the pre-dryer and the pre-dryer recharged with green lumber. Lumber enters the pre-dryer in the same form as previously prepared for drying in the three double-track Moore cross-circulation kilns. The

STICKERED 10 and 12 inch No. 4 and better common boards are being placed in the pre-dryer. Note the 60-inch 300 rpm fan.

DON E. HARPEL, who developed pre-dryer, takes increment borer sampling to determine moisture content of the kiln charge.

NEWMAN MACHINES ARE DESIGNED FOR YOUR PROFIT

Mr. Gibson can only consider a

Newman PLANER

Remember what we told you back in '42 Mr. Gibson. You wanted a planer and matcher that could "take it". We said "The NEWMAN No. 500 is the machine for you".—Remember? So it dressed *46 million* feet and good for another *46 million*; eh, Mr. Gibson?

A. C. GIBSON
ROUGH AND DRESSED
LUMBER
GRETNA, VIRGINIA

November 19, 1953

Mr. George P. Newman, Jr.
Newman Machine Co., Inc.
Greensboro, North Carolina

Dear Mr. Newman:

Eleven years ago I purchased my first new Planer and Matcher, which was a Newman #500.

You might be interested to know that I have run 46 million feet of lumber on this machine since that time. This is an average of 4 million feet of lumber per year. Since I have had this machine I have spent $273.40 for repairs--an average of less than $25.00 per year. These repairs, of course, do not include knives or belts but do include such things as bearings and bed plates.

Just the other day, I was offered more for this machine than I paid for it so you see why I must consider another Newman when I decide to buy a new machine.

Yours very truly,
A. C. Gibson

The NEWMAN No. 500 planer and matcher is now built in the recently completed modern plant of the NEWMAN company. Precision engineered to give long efficient years of trouble free service the 500 is dynetrically balanced for superlative finish at profitable high speeds. All shafts, bearings and rotating parts last longer and run smoother when balanced in the modern, scientific Newman way.

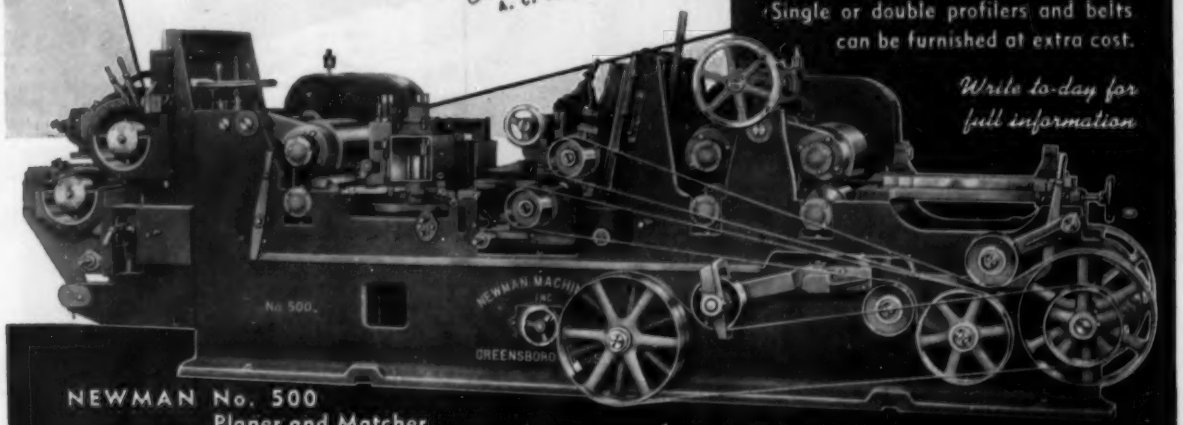
The NEWMAN No. 500 shown below has a capacity of 14" wide by 6" thick, 7" cutting circle with speeds up to 200 feet per minute. Six alloy steel feed rolls. Six knife cylinders of high carbon special alloy steel Ball and roller bearing throughout. Truing and jointing devices are standard equipment on the 500.

$7955.00

F.O.B.
Greensboro, N. C.

Single or double profilers and belts can be furnished at extra cost.

Write to-day for full information



NEWMAN No. 500
Planer and Matcher

DISTRIBUTED BY

STAR MACHINERY CO., INC.
Seattle Spokane
Portland

IDACO ENGINEERING & EQUIPMENT CO.
Oakland

FRANK E. JONES
MACHINERY CORPORATION
Los Angeles

Immediate Delivery On All Machines Can Be Made From Stock

NEWMAN MACHINE COMPANY, INC.
GREENSBORO, NORTH CAROLINA, U. S. A.

NEW

DODGE-TIMKEN ALL-STEEL PILLOW BLOCKS

HEAVY DUTY CAPACITY!

LESS SPACE! LESS WEIGHT!

A JOINT ENGINEERING DEVELOPMENT BY DODGE AND THE TIMKEN ROLLER BEARING COMPANY

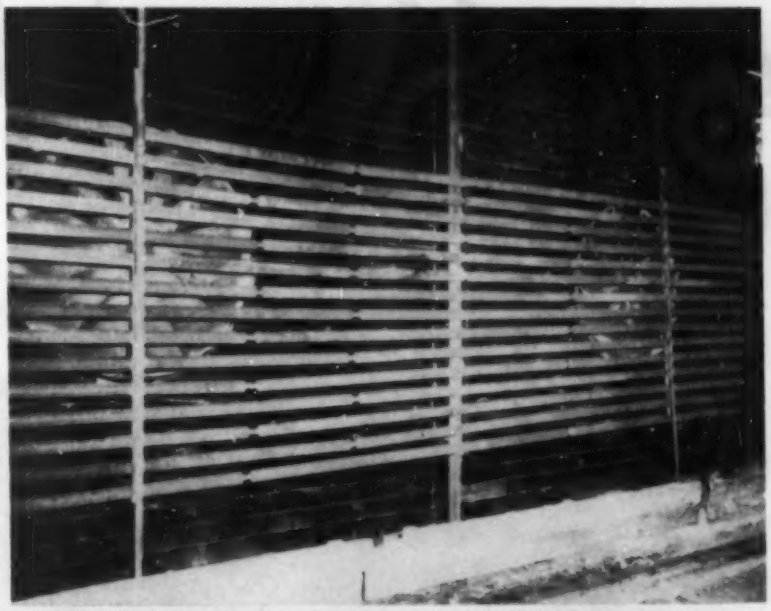
- All-Steel construction
- A new Timken bearing design
- High radial and thrust capacities
- Compact—minimum dimensions
- Minimum weight with maximum strength
- Fully self-aligning with spherical outer race
- Both expansion and non-expansion types
- Adapter mounting, proven through the years
- Double piston ring seals
- Sealed both on and off the shaft
- Fully assembled, permanently adjusted, lubricated and sealed at the factory

Here are the bearings for industry's toughest jobs. High radial and thrust capacities. Stamina to take heavy shock loads. And all-steel construction packs this load-carrying capacity into less weight and less space. Engineers are already specifying "Dodge-Timken All-Steel" for some of America's largest projects. Write for details and delivery dates, or call your Dodge Distributor.

DODGE MANUFACTURING CORPORATION
900 Union Street, Mishawaka, Indiana

CALL THE TRANSMISSIONEER, your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new cost-saving methods. Look for his name under "Power Transmission Equipment" in your classified phone book.

DODGE
of Mishawaka, Ind.



INSIDE WALL between Nos. 2 and 3 pre-dryer sheds. Note 16-line fin pipe coil, bottom baffle and two 60-inch fans, driven by G. E. motor through Pacific speed reducer.

drying technique has been compounded by adding the pre-drying stage.

Finned Coils Used

The additional drying section was constructed of lumber and timber items from the company mills—2x4s, 2x8s and 6x6s, using laminated span roofs of width equivalent to the double-track kilns.

Four sets of finned heating coils have been installed in the pre-drying structure. These consist of two with 27 lines each, one parallel to each of the two outside walls for the prime heating, and two 16-coil lines acting as boosters to maintain temperature of air blown in one side of the structure and exhausted at opposite side. These sets are 31 ft. long, have pipes mounted at 5½ in. center spacing and use 2 in. headers. A total of 2550 ft. of 1-in. finned pipe went into this installation which has capacity for over 100M feet of stickered lumber mounted on kiln dollies.

Eight 60-in. fans were installed to provide flow of heated air throughout the pre-dryer. These consist of two series of four fans each. Of the four, one fan of each series is mounted just inside each outside wall and the other two setting in line and equally spaced between the outside fans.

Each of the four wall fans sets in line with a 6x6 ft. opening. At any one time the two openings at one side serve as ports for fresh air and the two opposite ports acting as exhaust openings. The fans are reversed on the same schedule as for the kilns.

Air flows across the cribs at an average rate of 135 fpm; this figure is determined by measurements throughout the crib, including minimum circulation readings. Circulation rate through center of the cribs

(Continued on Page 103)

Don E. Harpel

Harpel majored in wood products at University of Washington College of Forestry, receiving his degree in 1950, and subsequently worked in various phases of forest products industry, including 1½ years for a large manufacturer of dry kilns. He visualizes another industry need—a combination stacker-unstacker for mills of around 50M ft. per day which will prepare lumber in stickered form for drying and then, subsequent to seasoning, reform the stock in carrier packages.

CHARGING KILN from pre-dryer shed. Note roof opening at kiln end of pre-dryer, for escape of steam leaking from kiln.

THERE'S A REASON
Lumber Mills prefer DFC PX-33

PX-33 Plastic Fire Brick is NOT made from scrap—but with all-new, hard-burned virgin flint fireclay crushed to sharp, angular particles. These assure high physical strength without loss of chemical or refractory properties.

- Equals super-duty fire brick.
- Easily installed for walls, sprung arches, flat arches, burner rings, air-cooled walls—the tough jobs in any boiler setting.
- High resistance to slagging; low in spall.

Write for PX-33 Bulletin and design recommendations on your setting; no obligation.

West Coast Distributor: W. E. Mushet Co., Portland and San Francisco. Stocks in principal cities; see "Brick-Fire" of yellow pages.

DFC
The DENVER FIRE CLAY Company
2301 BLAKE STREET • DENVER COLORADO
SALT LAKE CITY • EL PASO • ALBUQUERQUE

NOW! *Speed-o-Matic*® control on every LINK-BELT SPEEDER

...the only shovel-crane line with full power hydraulic control. Increases output up to 25%!

YES, every new Link-Belt Speeder shovel-crane is now Speed-o-Matic power hydraulic controlled to boost your yard and woodlands profits. What's more, the industry's most advanced machines bring you this bigger output in crane capacities from 10 to 60 tons!

Speed-o-Matic assures Link-Belt Speeder owners pin-point placement . . . faster cycles . . . reduced operator fatigue. It all adds up to *greater output per shift.* And Link-Belt has the extra "live weight" and strength to use the faster cycles and greater net horsepower.

For full information, see your distributor or write for Bulletin No. 2424, "The Inside Story" on Speed-o-Matic control. Also ask for facts on the broad Link-Belt Speeder line of shovel-cranes.

Fingertip Speed-o-Matic control has proved superior to all other methods of shovel-crane control. Smooth, instant response eliminates jerk, jump and lag.

NEW LS-98

Goble Logging Co.'s New 1-yd. LS-98 working with tram boom loads up to 4,000 bd. ft. logs near Eugene, Ore. In this mountainous work, operator Walt Weaver says, "I especially like the travel-steer brakes, the clutches and power steering." Complete clutch interchangeability, slack kicker available for either or both front and rear drums, four front conical hook rollers mounted on anti-friction bearings and in equalized pairs, free spooling drums mounted on anti-friction bearings —represent only a few of the many LS-98 features for loggers.

LINK-BELT SPEEDER CORPORATION
Cedar Rapids, Iowa

13.830

Your Factory-Trained Sales and Service Specialists

NELSON EQUIPMENT COMPANY
Portland 2, Ore., Seattle, Wash.

EDWARD R. BACON COMPANY
San Francisco, Calif.
Branches at Sacramento, Oakland, Fresno, Calif.

WESTERN MACHINERY CO.
Spokane, Washington

PURVES RITCHIE LIMITED
Vancouver, B.C.

MONTANA POWDER & EQUIP. CO.
Helena, Billings, Mont.

WESTERN EQUIPMENT CO.
Boise, Idaho

Lundgren Lumber Co.

(Continued from Page 101)

runs around 180 fpm. Tops and bottoms of the cribs are baffled. End baffles were installed but subsequently removed because they reduced across-crib velocity of airflow by about 40 fpm.

According to Harpel, this straight-through pattern of air circulation requires a great deal of heat. He says it might be practical to install a baffle arrangement for recirculating air through the shed.

Quality and Quantity Upped

Cupolas were installed at each roof peak and an 18-in. roof opening provided between pre-dryer and dry kilns to exhaust escape steam

Drying Data

A series of samples showing drop in moisture content of test runs indicates the efficiency of the predryer.

Two sample groups disclose the following:

Ten samples averaging 115.5 per cent MC before predrying dropped to 77.17 per cent MC with 28 hours of predrying.

Ten samples averaging 110.5 per cent MC before predrying dropped to 73.04 per cent MC with 42 hours of predrying. Detailed results are given below:

Sample No.	0 Hours	Predry 42 Hours
	Track 3	
11.	172 Per Cent	110 Per Cent
12.	109	77.3
13.	29.8	33.2
14.	101.5	51.4
15.	121.5	84.3
16.	82	56.8
17.	157	63.5
18.	98.25	71.9
19.	124	100
20.	116	82
	0 Hours	Predry 42 Hours
21.	97.5	48.5
22.	108	104
	Track 5 & 6	
23.	145	95.5
24.	126.5	104.5
25.	118.5	67
26.	127	78.5
27.	100	71
28.	129.5	89.8
29.	85	46.1
30.	120	67.75

coming into the shed from the kilns.

Harpel calculates 100 to 125 horsepower of steam is continuously supplied for heating and moisture in the pre-dryer. This compares with 160 h.p. steam consumed in the kilns.

Temperature checking at 24 points in each crib indicates an 80° F. average and extremes of 72° and 86° F. The across-load drop runs around 10°. The operation plan calls for air temperatures of less than 100° F. Steam pressure at the shed is about 100 psi.

The operators report that the av-

(Continued on Page 104)

LUMBER OPERATIONS NEED CASH TO:

every

Carry logs, lumber, veneers and plywood panels

business

Make necessary repairs and buy modern equipment

needs

Extend credit to customers thousands of miles away

operating

Invest money in timber cutting contracts or long term timber purchases

capital

our business is to furnish funds

whether your requirements are for $25,000, $3,000,000 or more, funds are available to you quickly through Heller commercial financing plans.

Heller advances funds for any required period . . . months or years, on a continuing basis. Management and profits are not affected. Because you use our funds as needed and pay accordingly, Heller plans are economical.

Proof of success of our financing programs is evidenced in the fact that last year Heller advanced over Six Hundred Million Dollars to industrial and commercial firms.

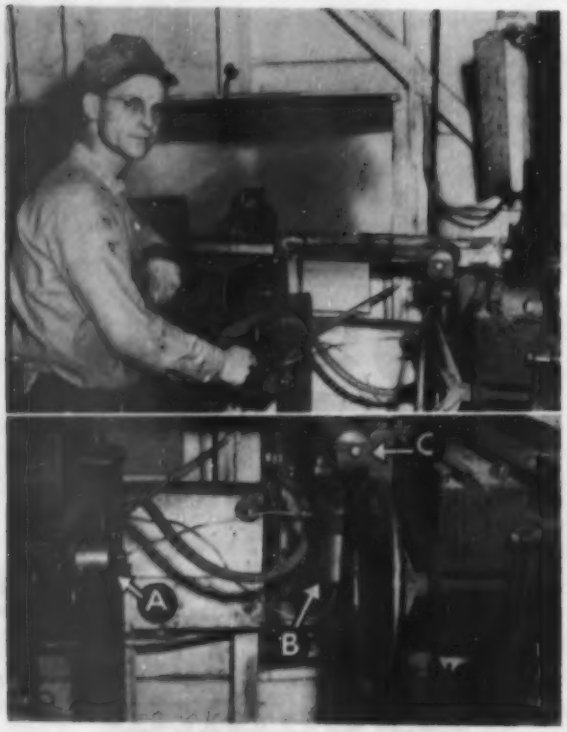
To get acquainted with our services, write for information today. Your inquiry will receive prompt, courteous and confidential treatment. Feel free to write without obligation.

WALTER E. HELLER & COMPANY · FINANCING FOR INDUSTRY ·

MANUFACTURERS AND DISTRIBUTORS: Write for information on Heller Machinery and Equipment Leasing and Installment Sales Plans.

Walter E. Heller & Company

DEPT. TL, BANKERS BUILDING
105 WEST ADAMS STREET, CHICAGO 90
NEW YORK OFFICE 10 E. 40TH ST.
NEW YORK 16



Top: GEORGE WIEMER, head filer at Associated Lumber and Box Co., Wilseyville, California, demonstrates his new power device for raising the saw from Armstrong rolls. Bottom: Close-up of Weimer's device. (A) Valve, which is manually controlled, (B) Cylinder, 3 x 4, in which piston thrusts up. (C) Roll which holds saw against top roll to take dish out of saw.

Filer Develops Power Device

Filers really *do* get good ideas from reading THE LUMBERMAN.

George Wiemers, head filer, Associated Lumber & Box Co., Wilseyville, Calif., who uses Armstrong rolls, states that he got his idea from a story he saw about a similar device used by Al Schenkel, head filer, Ralph L. Smith Lbr. Co., Anderson, Calif. Weimers formerly filed with Al at Red River Lumber Co., Westwood, Calif.

"The gadget I have developed is a power device for raising the saw and holding it when I'm taking the dish out of it on the Armstrong rolls. Harry Conger, our master mechanic, built the air cylinder and valve. It works like this: I operate the valve manually and air in the 3x4-inch cylinder pushes the roll up under the saw, against the top roll. This does away with the manual labor involved in holding the saw against the top roll, and hammering the dish out by hand."

Tow Bar Hitches Aid Logging Use

Usefulness of logging trucks has been extended by Charles J. Jellison, Kalispell, Mont., logging contractor, by equipping his vehicles with two tow-bar hitches, both front and rear.

He welded front hitches directly to the truck bumpers, made of 5-in.

FRONT HITCH mounted on rugged bumper of logging contractor Charles J. Jellison's trucks. Front hitch couples directly to rear hitch of other trucks and can be used to either push or pull crippled trucks.

double-strength pipe welded solidly to the front frame. He attached rear hitches to bumpers and frames by weldment. Hitches have 1¾-in. diameter pins and fit D7 "Caterpillar" tractor hitches.

First use Jellison had for these auxiliaries occurred when an axle of a loaded truck broke 11 miles from a dump. The operator summoned the nearest empty truck via the company two-way truck radios and then removed the broken axle. With arrival of the empty truck, its rear hitch was coupled into the front hitch of the cripple and the latter towed to the dump. After unloading the logs it was taken on to the shop for repair. This took up about one hour's time of the second truck.

According to Jellison, this direct coupling ties the vehicles solidly together. There's no slacking off and picking up again. As one of the coupled vehicles moves, so does the other.

This hitch arrangement, costing around $25 per truck, is suitable either for pushing or pulling.

Stoltz Land & Lumber Co., the organization for which Jellison operates on contract, has also installed this type of hitch on its trucks as has Jim Somerville, who hauls for Jellison on subcontract basis.

Two Sawmills Burn

Fire destroyed the Lithia Lumber Co. sawmill in Ashland, Ore. in July. The mill employed about 120 men and had a daily capacity in a 16-hour operation of from 150,000 to 180,000 board feet.

Fire destroyed the Central Lumber Co. mill at Derry, eight miles west of Salem, Ore. in June, with a loss estimated at $70,000.

Lundgren Lumber Co.

(Continued from page 103)

erage moisture content of a charge in pre-dryer drops from 125% about 22% every 12 hours until reaching about 50% MC, at which point drying rate slows perceptibly.

Predrying a charge of 6-in. common behind a kiln charge of selects brings the moisture content to approximately 31% in 60 hours. According to Harpel, this helps even out moisture content of the charge and assists in bringing charge up to high kiln temperature in a short time.

Not only has the system upped production of seasoned lumber but also assists qualitywise.

"The most noticeable thing about quality is the condition of the knots," Harpel reports. A higher percentage of spike knots hold without serious checking. Round knots also season out in better condition when processed in the pre-dryer before kiln drying.

The Lundgren organization finds additional production returns justify expense of the installation. Fans, motors and coils cost about a third as much as would have been required for one double-track kiln. Production increase amounted to nearly twice as much as would a new kiln.

Eased Edge 2" x 4"s
THREE AT A TIME

MULTIPLE PRODUCTION of eased edge stock from a single piece of rough lumber is another of the many profit-making operations that you can do to perfection on a Stetson-Ross Planer and Matcher with built-in "cartridge" profile units.

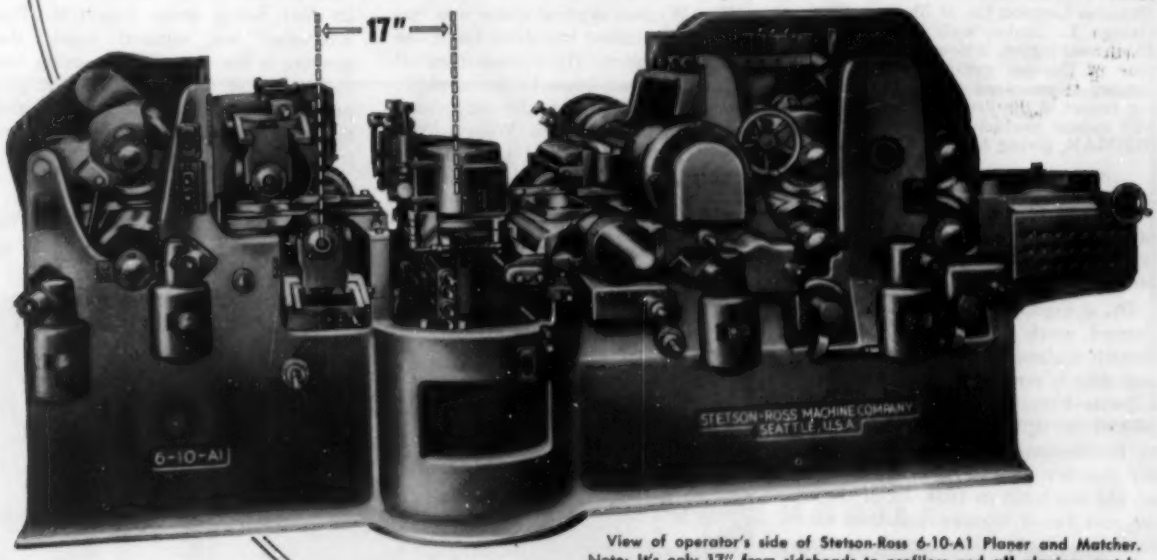
As every planerman knows, lumber in the planing process is very accurately held at the matcher sideheads. Because of this fact, splitting, ripping or profiling can best be done while the stock is still firmly guided by the sidehead shoes—before it has a chance to deviate from its true matching position.

That is why a Stetson-Ross Planer and Matcher, with profilers located ahead of the outfeed rolls and adjoining the sideheads, provides you with the *plus* value of *perfect* eased edge splitting or ripping—and at no extra cost!

Outfeed Rolls Clear the Machine Completely!

The small vertical gear motor on the right above is used to raise and lower the top outfeed roll. This motor is controlled by push buttons located at the feeder's station so that the top roll can be lowered quickly and effortlessly to clear the last board through the profilers, thus preventing damage from burn marks. These built-in hoist motors are also available for rapid setting of top cylinder, top profiler, top infeed rolls, and outside sidehead.

Motorized hoists mean more hours per day of actual production.



The outfeed rolls clear the planed lumber through the profilers!

View of operator's side of Stetson-Ross 6-10-A1 Planer and Matcher. Note: It's only 17" from sideheads to profilers and all planing, matching, profiling, ripping or splitting is done within a space of 48". This close coupling means better machine work, easier feeding, fewer breakups.

You are invited to write for further information.

STETSON–ROSS
MACHINE COMPANY
SEATTLE 4, WASHINGTON

Export Division, 301 Clay St., San Francisco 11, Calif.

COMMUNITY FOREST in Reichenbach IK. This is in Kander valley, Switzerland, is 90 per cent spruce and 10 per cent white fir, has a volume of 40,000 bd. ft. an acre. Rotation is 120 years; cut is 8,000 board feet an acre at fifteen-year intervals.

Logging in Switzerland

Is reported by George L. Drake on European tour

Editor's Note—Recently retired from Simpson Logging Co. at Shelton, Wash., George L. Drake, well known Pacific Northwest logger, is now on an extended tour of Europe, getting new ideas on logging as practiced there. The following report is the first of a series which will appear exclusively in THE LUMBERMAN, giving highlights of his trip.

* * *

The woods are mainly spruce on the upper slopes, with more white fir as the elevation decreases, and beech forests in the valleys.

Dr. Alfred Huber, who took advanced work at the University of British Columbia several years ago and who is now logging engineer for a Swiss-French pulp mill in Zurich, picked me up at Lucerne. We drove to Reichenbach, a Swiss village in the Kander valley. After a lunch in an old inn built in 1634, all of wood, we met Jacob Wyssen, who has visited the Pacific Northwest several times.

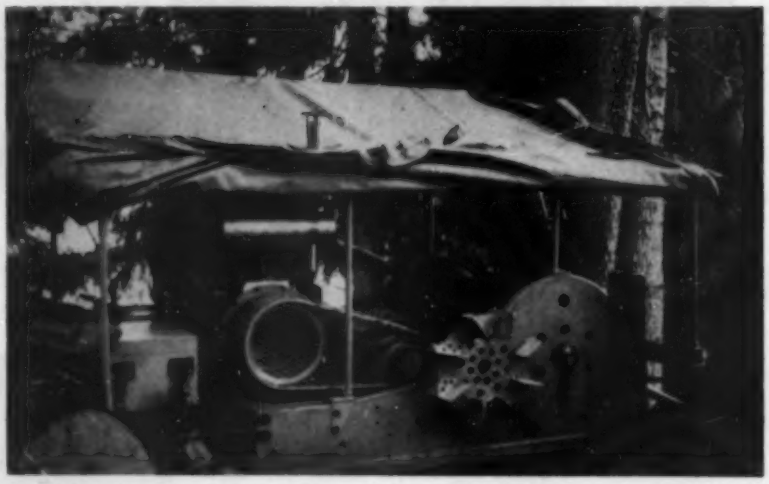
While visiting the operation near Reichenbach IK where the Wyssen skyline crane was operating, I climbed a steep wooded slope (like the upper Satsop in Washington), and at the top of the ridge where the yarder was located, found a mountain pasture and summer chalet. These unexpected openings are a typical part of the Swiss landscape.

The Wyssen skyline crane was operating in timber too steep for horse or hand logging. The former method of logging had been by hand-skidding in tree lengths, during favorable ground conditions. With a little snow this method had necessitated skid trails 50 feet wide. Standing trees showed damage from the sliding logs.

Under the Wyssen system, logs are carried off the ground with little damage to the remaining stand. In this particular job the forester had restored the skidding road, clearing it to an 8 feet width, which was too narrow, a distance of 15 to 20 feet being more practical. The narrower the cleared road, the greater is the chance of opening the choker hook when the turn is going to the landing. Because of the narrow road, a Molly Hogan was used to secure the choker hook.

Skyline System Described

The layout was quite simple. The one-inch main line was secured by



WYSSEN YARDER, type W-60, showing air brake. Machine weighs 250 lbs., has drum capacity of 6000 ft. of 1/2-in. line, working distance of 5500 ft., 700 bd. ft. capacity.

People You Know

Random observations by George Drake on his European trip:

In Geneva, I met Arthur B. Langlie, Governor of Washington, who was attending the International meeting of the Labor Branch of the UN.

In Paris we met Jaques Sirand of Rayonier, Inc.

In Rome I encountered Ted Shaw, former state forester of Indiana, at the FAO office.

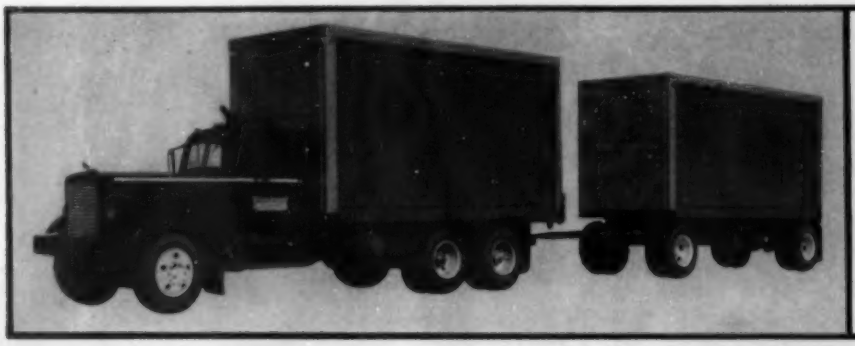
Got straightened out on logging negotiations between King Solomon and King Hiram. Apparently Hiram also got Solomon to throw in a few acres of land. Sounds all the more like two loggers making a deal.

Venice has no hoot-owl shift running because there is little danger of ground fires.

Switzerland is a well kept country. The high country has unexpected summer pastures, a distinctive landscape feature. Six per cent of the country's total land area is arable. Extensive forests are interspersed with pasture land.

Attended the FAO European Forestry Commission's meeting of the Joint Working Party on Logging Techniques and Training of Forest Workers, with Alex Koroleff from Canada, as technical advisors to the Secretariat. It was a real Logging Congress—with Ph. D's running the show instead of the sidepushes.

Jim Larson, 1953 graduate of Oregon State College, Corvallis, Ore., joined our party at Reichenbach, with another classmate, Alex Goodhard. They have been hitchhiking their way, going as far south as Spain on their tour of European forests.



Hauling problems solved by TRAILMOBILE Hauling Specialist

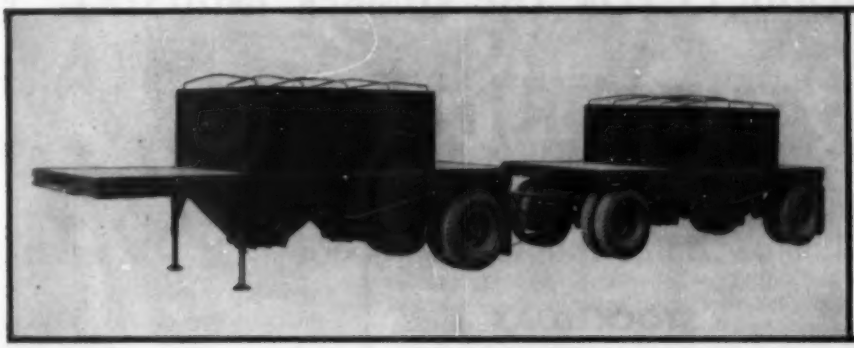
Trailmobile truck body and trailer 'specially designed for hauling plywood sheet. Open sides with tie-down tarps permit easy, quick, loading and unloading and all-weather protection. Rugged frame is built to stand heavy loads and strains.

TRAILMOBILE fits the trailer to the job...helps you solve your hauling problems

Today, better hauling methods can be your key to profits. Hauling equipment must be rugged, dependable . . . but just as important, it must be *designed to fit your specific job needs.*

That's where your Trailmobile Hauling Specialist can help you. He can show you how your present equipment can be converted for more efficient performance . . . how Trailmobile Trailers can fit your job to save you time, work and money.

More and more lumbermen are working with the Trailmobile Hauling Specialist. So, for the right solution to your hauling problems, write or call your nearest Trailmobile Branch or Trailmobile Distributor today!



Trailmobile Trailers for multi-purpose hauling jobs. Easily and quickly converted to flat-beds for hauling out. 'Specially designed for hauling cement on back-haul. Can also be used for hauling machinery and other equipment.

Factory Sales and Service Branches

Oakland, California
640 Hegenberger Road

Los Angeles, California
1765 E. 46th Street

San Francisco, California
2030 Third Street

Salt Lake City, Utah
365 West, 1370 South

TRAILMOBILE INC.

The Trend is to **TRAILMOBILE**

A subsidiary of Pullman Incorporated

Distributors

Portland, Oregon
Riddell Trailer & Equipment Co.
2305 N.W. 30th Avenue

Spokane, Washington
Critzer Equipment Co.
E. 3804 Front Street

EXPLAINING MOLLY Hogen on choker line hook used on the narrow road. From L., GEORGE L. DRAKE, JACOB WYSSEN; ALEX GOEDHARD in background. Ground is steep on this site.

FOUR LOG turn of 800 bd. ft. From L.: GEO. DRAKE, JACOB WYSSEN, JIM LARSON.

a deadman at the foot of the hill, and to a tree root at the top of the ridge. (A point of interest to Northwest loggers—an anchor tree with full crown is picked. Such a tree has developed a strong root system to overcome wind resistance.) From the root anchor the line is passed over a nearby topped tree, the line being in a notch formed by the trunk and a limb. In order to keep the logs well off the ground, intermediate supports were placed in trees. The line was fairly tight.

For skidding, the single-drum, wide-face yarder was set at the top of the slope, anchored to the same tree as the skyline. The carriage was suspended on the one-inch skyline and connected to the yarder by the half-inch skidding cable. At the place where the logs were to be yarded a stopping device was spotted on the skyline, its position being maintained by a snub line.

Starting from the landing the carriage was brought up the skyline by the yarder until the carriage contacted the stopping device, which

(Continued on Page 110)

CHEMICAL PRODUCTS FOR THE LUMBER INDUSTRY

SANTOBRITE* S

The pellet form sap stain and mold control for all hardwood and softwood lumber

STOCKED AT

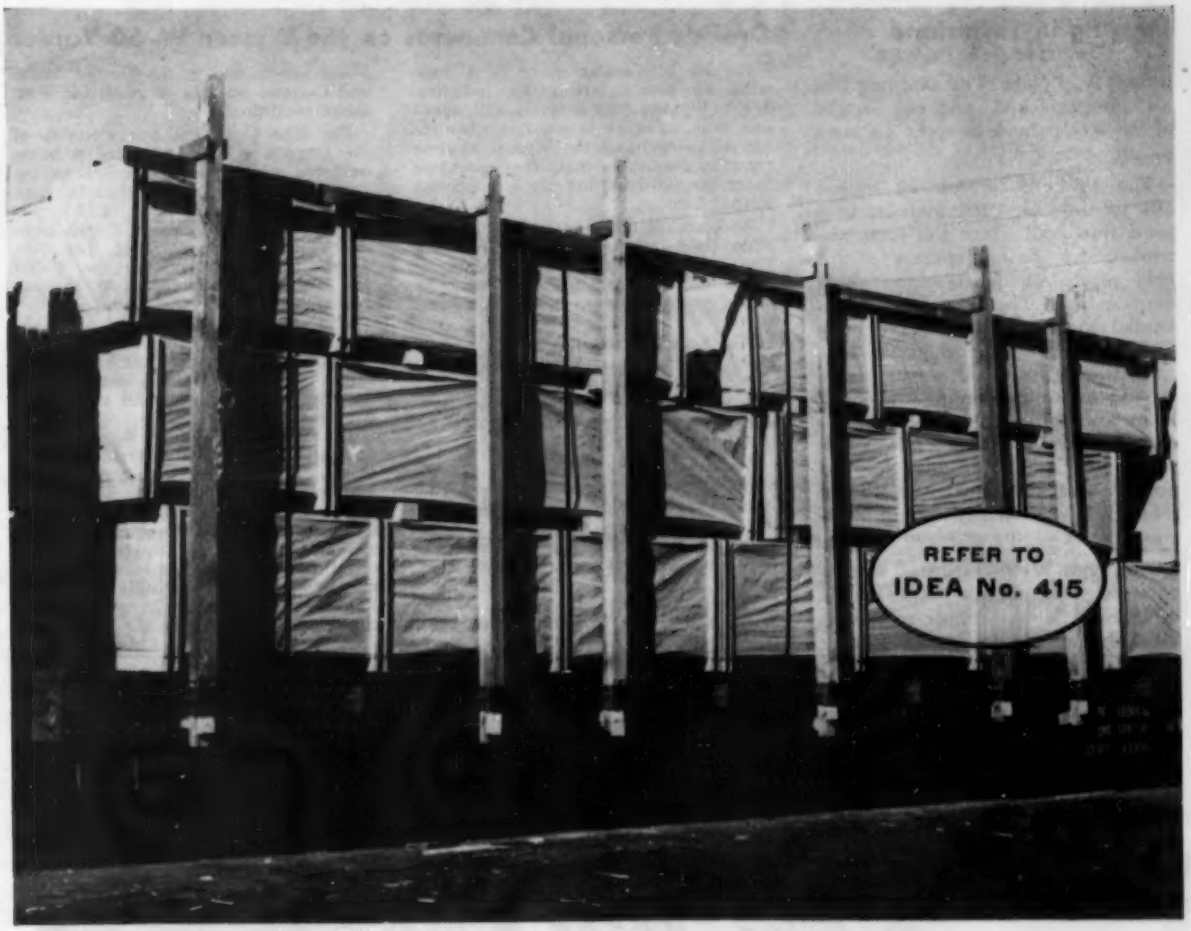
TAYLOR-EDWARDS WAREHOUSE & TRANSFER CO.
800 No. Hamilton Street
Spokane, Washington

RUDIE WILHELM WAREHOUSE CO.
1233 N.W. 12th Avenue
Portland, Oregon

HASLETT WAREHOUSE CO.
P. O. Box 251
Sacramento, California

*Trade Mark Reg. U.S. Pat. Office by Monsanto Chemical Company

R. T. VANDERBILT CO. INC.
230 Park Avenue, New York 17, N. Y.



AIM* for SAFE SHIPMENT of Wood Products with Acme Steel Strapping Ideas

Acme Idea Man, Richard F. Brennan of Seattle, helped solve this shipping problem.

ask your *Acme Idea Man to help solve your problems

Piece-by-piece handling has been eliminated at Brooks Lumber Company, Bellingham, Wash., by palletizing wood products with Acme Steel Strapping. Idea No. 415 is typical of the modern shipping methods used at this West Coast company. In this case, more than a million feet of 2½" x 4" pipeline staves were delivered in Alaska undamaged and immediately ready for installation. The carefully prepared staves were assembled into bundles . . . protected with impregnated paper . . . then bound securely with Acme Steel Strapping. Finally, the palletized bundles themselves were strapped together as single carload units.

Ask your Acme Idea Man to analyze your shipping and packaging operations. He'll gladly give a demonstration of Acme Steel Strapping methods. Or, write Acme Steel Products Division, Dept. AA-84, Acme Steel Company, 2840 Archer Avenue, Chicago 8, Illinois.

AIM *For Safe, Lower-Cost Shipping*

ACME STEEL

Logging in Switerland

(Continued from Page 108)

locked it in place. The skidding line was then slacked, and the weight of the choker hook brought the hook to the ground.

The workers carried the choker out to the side, 150 feet being a good side haul. Here the turn was hooked on, using endless straps (old pieces of quarter-inch skidding cable). The turn was then hauled in. When the choker hook hit the carriage and locked, the carriage was released and started down the skyline to the landing, the speed being controlled by the brake located inside the drum. To show adaptability of the machine to yard uphill as well as down, the load of four logs was hauled uphill at a good speed.

The type W-60 yarder I saw is powered with an air-cooled four-cycle SLM Diesel engine manufactured by the Switzerland Locomotive Machine Works at Winterthur, Switzerland.

Specifications are as follows:

At 1500 rpm—50 hp., 1800 rpm—60 hp.; Weight: 470 kilos; Drum capacity—6000 feet, ½-inch line; Working distance—5500 feet; Capacity—2½ long tons, or at 8 lbs. per bd. ft., 700 bd. ft.

On a mile haul, this size machine with four men will put out 10 tons per hour or 2800 bd. ft.

Drake's Personal Comments on the Wyssen W-60 Yarder

It's an interesting story of a man with an idea, starting an industry. Jacob Wyssen was a small-mill operator who, in order to obtain timber for his mill, developed the Wyssen skyline crane to get timber that other operators found too costly to log. He is the Swiss Frank Lamb.

To keep the machine as light as possible, light but strong alloys are used. The machine is constructed of small units, so replacements are easy to make: example, drum is two-sides and barrel.

The controls are like those on an automobile, and work very easy.

The brake consists of two shoes inside barrel, going full length and with auto brake lining, air being forced through inside of barrel to cool brake.

Even though the slope of the ground may go up to 75 per cent, the slope of line is kept to maximum of about 35 per cent.

To date some 300 machines have been built since the first one was constructed in 1939.

Three types are being made: W-20, W-30 and W-60. Three of the type W-30 are in use in the United States and Canada, but are to small for West Coast conditions.

For West Coast and heavy timber of the Tropics, a larger machine is being designed which will be known as the Type-200, with a capacity of 10 tons, or approximately 2500 bd. ft.

This machine will use a 2-inch skyline and a 1-inch skidding line. The weight of the carriage for the W-200 will be approximately 1000 lbs. as against 250 lbs. for the W-60.

Wyssen has developed and is building a special phone that is waterproof, has slight battery drain and in addition shows the calls visually as well as audibly, making it easier for the yarder engineer.

The typt W-60 should be adequate for our pine and spruce east side forests, in the larger trees, cutting short butt logs.

For our old growth fir forests on the upper slopes, the proposed W-200 should work. A great deal will depend on proper installation and making necessary spare parts readily accessible. For leaving the forest in good condition, it does an outstanding job.

Robert F. Krohn, who has been on leave of absence from Fibreboard Products, Inc., to attend Yale University, recently received a degree of Master of Forestry. Mr. Krohn has now returned to the Timber Division of Fibreboard as a forest engineer.

PEORIA MALLEABLE MEANS HIGHEST QUALITY

IN CASTINGS... IN CHAIN...

Only the best materials go into a "Caterpillar"! And, for over 20 years, Peoria Malleable Castings have met Caterpillar Tractor Co.'s rigid specifications.

The same high-quality malleable iron used by "Peoria" for Caterpillar castings is used for your Peoria Chain. That's why it's *got* to be the best!

PEORIA CHAIN CO.

103 S. W. Front Ave. Portland 4, Oregon

Factory Representative for

PEORIA MALLEABLE CASTINGS CO.

GEORGE E. ZWEIFEL *Phone Be 0043*

Get swift satisfaction
for your adhesive needs
with **RCI GLUES**

Whether you use hot press, cold press, or R/F, whether you patch or splice, whether you make plywood, furniture or utilize wood waste, you'll find the glue that's right for you in RCI's wide-range line.

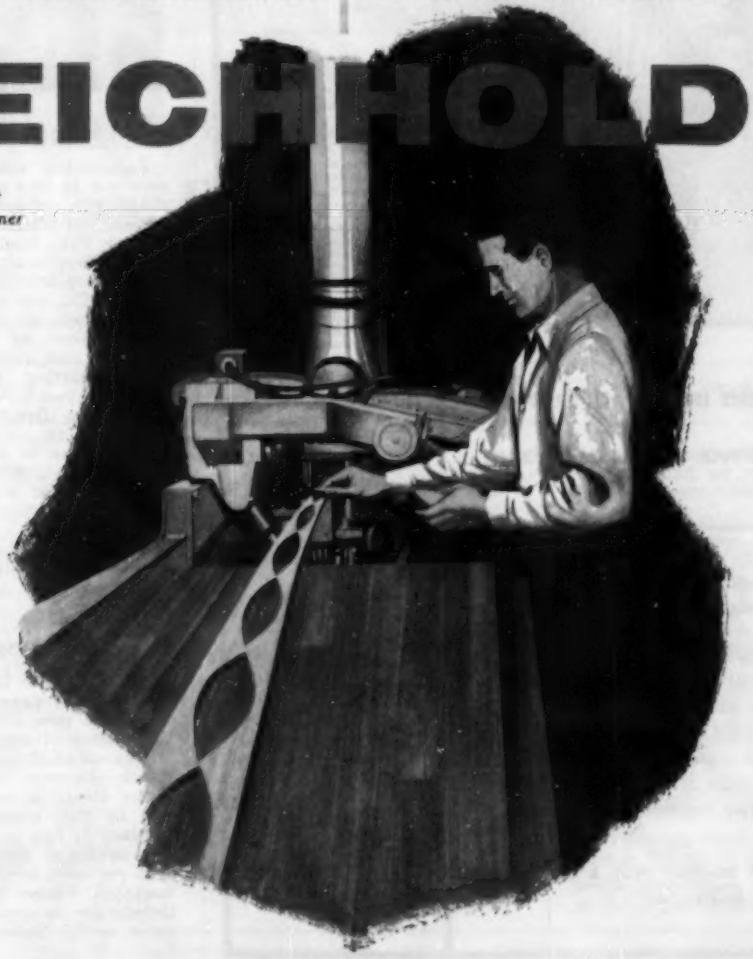
RCI manufactures urea-formaldehyde, phenol-formaldehyde and resorcinol resin adhesives, as well as soybean and casein glues . . . produces its own phenol and formaldehyde to assure quality . . . supplies you promptly via rail tank car or highway tank wagon from numerous strategically-located plants . . . aids you technically from nation-wide field service offices.

All we ask you to do is try a production run of the glue we'll recommend for you. Call or write us, and you'll see why it pays to make RCI your source of glue supply.

REICHHOLD CHEMICALS, INC. 525 NORTH BROADWAY, WHITE PLAINS, N. Y.

REICHHOLD RCI

Creative Chemistry . . .
Your Partner
in Progress



Synthetic Resins
Chemical Colors
Phenol
Glycerine
Phthalic Anhydride
Maleic Anhydride
Sodium Sulfate
Sodium Sulfite

LOADING segment of 254 ft. arch laminated by Timber Structures, Inc., Portland, Oregon. It is the largest ever built of timber.

Longest Arches Built

Timber Structures, Inc., Portland, Ore., has upped its own world record for the longest arches ever built of timber. The organization provided the arches for a new field house of Union College of Schenectady, N. Y. These measure 254 ft. tip-to-tip with 190 ft. clear span and 66 ft. center height. Each arch consists of 25 2x12-in. Douglas fir laminates. Roof deck and exposed in-walls are also of this species, the whole project requiring 414,853 bd. ft. of lumber—estimated at sufficient to build forty small homes.

As put out for bids this job was specified in both steel and timber construction. Timber won out on both economy and beauty.

The unusual order was shipped early in July by rail. It required four gondola cars for cradling the arches and five flatcars carrying columns, girts and other materials.

16 HOLES BORED IN ONE OPERATION

WITH GREENLEE NO. 386 GANG BORER

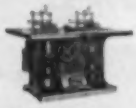
Here's another example of how the GREENLEE universal-spindle gang borer speeds production, assures accuracy of product. At Mid-State Wood Products Corp., Rockford, Illinois, this machine with one quick stroke bores 16 holes in speaker panels for television sets. Due to its wide range and the convenience and simplicity of its adjustments, the GREENLEE is adapted to a great variety of boring work. Available in lengths from 4 to 16 feet to meet your exact production requirements.

Write for Bulletin 386 **GREENLEE BROS. & CO.**
1808 Twentieth Ave., Rockford, Ill.

GREENLEE WOODWORKING MACHINERY AND TOOLS The GREENLEE line includes tenoners, mortisers, borers, saws, planers, and shapers.

GREENLEE DOUBLE-END TENONER Renowned for quick, easy setup and wide versatility. Single-end Tenoners also made by GREENLEE.

GREENLEE SIX-ROLL SINGLE PLANER . . . exceptionally smooth in operation. Line also includes other single and double planers.



GREENLEE MOTOR DRIVEN SHAPER . . . all-round unit for high-speed, precision shaping.

MORTISING AND BORING TOOLS . . . Countersinks, Hollow Chisels, Multi-Spur Bits, Machine Bits and other tools by GREENLEE.

GREENLEE

NW Logger Buys Plane

Supervising timber and lumbering activities in two or three states might sound like an impossible job for one person, but Ralph Kappler, above left, Mulino, Ore., lumberman, does it with a new Beechcraft Twin-Bonanza six-place airplane. He owns Kappler Lumber Co. and scouts timber as well as customers all the way from Washington down to Santa Rosa, Calif., where a new remanufacturing operation is starting. Kapplier flies about 300 hours yearly; with purchase of the twin-engine Beech he expects to increase his time aloft.

In addition to his lumbering, Kappler operates a flying school at his private airport at Mulino. Shown above at right is Bryce Piper, manager of the school.

Kappler pilots his plane himself. He bought his new plane from Flightcraft, Inc., Beechcraft distributors of Portland, Ore.

Free Bulletins Available

"How to Grow Longleaf Pine" is the title of a 25 page "Farmers' Bulletin No. 2061" now available through the U. S. Dept of Agriculture.

Removal of all hardwoods larger than 7-inch diameter (except for a few choice trees) in an improvement cutting in 1950, near Birmingham, Ala., resulted in two years of increasing in pine seedlings from 1,094 per acre to 2,505 per acre, according to a report by Southern Forest Experiment Station. Details are in copies available on request to the Station, in New Orleans, La.

HERE'S HOW YOU SAVE WITH FORD *TRIPLE* ECONOMY

New Series T-700 tandem axle trucks are Ford factory-built for low first cost. Rated for 27,000 lbs. GVW, 42,000 lbs. GCW. Choice of two new LOW-FRICTION engines—the 138-h.p. *Power King* V-8 with 256 cu. in. displacement and the 152-h.p. *Cargo King* V-8 with 279 cu. in. displacement (used in comparison below).

Make Courtesy your Code of the Road!

You get more of the features you need most in a New FORD *TRIPLE ECONOMY* TRUCK!

Here's proof. Your Ford Dealer can give you plenty more!

(Or write Ford Division, Ford Motor Co., Dept. T-76, Box 658, Dearborn, Mich.)

FEATURE	FORD T-700 TANDEM	TRUCK I TANDEM	TRUCK G TANDEM	HOW YOU BENEFIT
ENGINE				
Max. Gross Horsepower	152	145	145	**Most powerful engine in this class!** Ford also offers more horsepower per cubic inch of displacement. Smaller displacement usually means less gas.
H.P. per cu. in.	0.545	0.471	0.480	
Piston Stroke (in.)	3.50	4.50	4.00	**The slower piston speeds** of Ford's Short Stroke design reduce friction and wear, increase engine life.
Piston Speed (ft. per min. at 3000 rpm)	1750	2250	2000	
Free-turn Intake and Exhaust Valves with Integral Guides	YES	NO	NO	**Free-turn valves with integral valve guides** let valves run cooler, last up to 50% longer!
CAB & CONTROLS				
Power Steering standard	YES	NO	NO	**Only Ford** has Power Steering as standard (with 152-h.p. engine). Cuts steering effort as much as 75%.
Glass Area (sq. in.)—				
Windshield	938	841	735	**Ford's "visibility unlimited"** means greater truck-driving safety, ease and comfort for the driver.
Total Std. Cab	2103	1705	1709	
Seat Shock Snubbers	YES	NO	NO	**Only Ford** has seat shock snubbers and woven upholstery for a smoother, cooler, more comfortable ride.
Woven Plastic Upholstery	YES	NO	NO	
CHASSIS				
GVW Rating (lbs.)	27,000	26,000	26,000	**Money-saving,** trip-saving capacities are an important feature of all Ford **Triple Economy** Trucks.
Payload-Body Capacity (lbs.)	19,225	18,180	18,340	
Front Axle Capacity (lbs.)	6,000	5,500	5,000	**Ford's front axle** capacity exceeds other makes by as much as 1000 lbs. for greater dependability, safety.
Total Rear Spring Capacity (lbs.)	17,700	16,800	16,800	**Greater spring capacity** is another example of Ford's sturdier construction for bigger payloads, longer life.

All chart information is based on latest data available as of 6-30-54 and is believed to be reliable but is not guaranteed.

OPERATORS OF Minoque mill, Snohomish, Wash., shown cutting rough cedar boards for home building market. Headsawyer VINCE LIDEN, left, with BILL HAMPTON.

Small Mill Cuts Specialty Product

How can a small mill survive or even prosper competing for sales against more efficient high-capacity larger sawmills?

Flexibility of operation and elimination of the payroll responsibility are two answers. While many such mills are common in eastern U. S., the western lumber country is characterized by larger operations. A two-man mill near Snohomish, Washington, is, therefore, somewhat out of the ordinary, if not unique.

This small mill is a family-type operation producing small quantities of accurately sawed boards for a premium market: board and batten vertical siding. This type of exterior finish is currently popular because of architectural trends that blend rustic with modern.

Cedar is the major species cut, with some Douglas fir. The output consists entirely of rough green boards and dimension mainly 2x10, 2x12, 5/4x10 feet (for resawing into bevel siding), 1x12, 1x8, utilized in the Seattle area for home and light building construction, such as on schools.

Accurate Sawing Done

Operators of the mill take pride in their accurate sawing, and rejected lumber is a rare item. Prices as high as $90-100 per M have been received for rough cedar boards.

The mill is powered by two automotive-type gas engines. The headsaw is a 52 inch circular Hoe, driven with Gates Rubber Co. "Vulco" V-belt. New Dodge (of Mishawaka) bearings and sprocket equipment are used on the off-bearing belt. Two Titan chain saws are used on the log deck.

Capacity is about 2500 bd. ft. per day of exceptionally accurate lumber. Optimum log is between 16 inches and 24 inches in diameter and 16, 18 or 20 ft. in length. Good sound red knots are highly desirable because they give exterior walls a pleasing appearance when weathered.

Logs originate at the Monroe Logging Co. show in the Skykomish river drainage. The small-diameter high-mountain cedar obtain is actually a salvaged product from the main pulpwood logging show.

The mill has been the property of the family of P. T. Minoque since his passing last spring and lately has been operated as a leased-out operation.

Fir Bark Featured

The May issue of the Shell Oil Co.'s magazine "Shell Progress" carries a major editorial feature entitled "The Bark is Good for the Bite." The article is by Donald H. Clark. It describes in detail and illustrates the Weyerhaeuser Timber Co.'s bark products. The article tells how they are manufactured and how they are used.

Columbia
PLYWOOD PRESSES

Solve your plywood production problem with a production-proved Columbia Hydraulic Hot Plate Press. Columbia will engineer and produce presses for standard or special size panels, assuring you fast, efficient production.

Only Columbia offers so many exclusive design features. Write for free Bulletin No. HP-2 and name of nearest distributor. Columbia Division, The Lodge & Shipley Co., Hamilton 5, Ohio.

Check these
Columbia
Design Exclusives:

• AUTOMATIC AIR BLEED-OFF ON ALL CYLINDERS

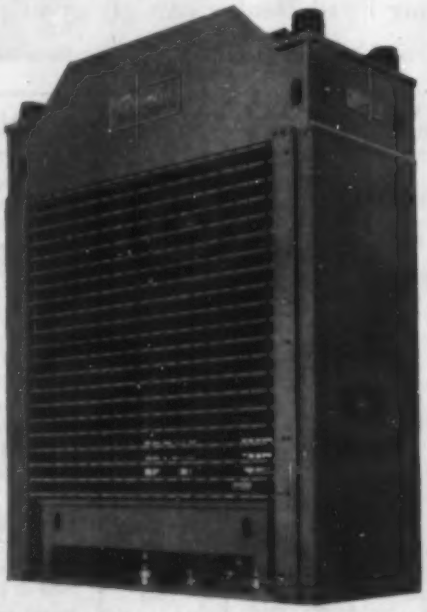
Special valve eliminates the difficulty of manual bleeding, speeds production.

• BUILT-IN REMOVABLE CARTRIDGE TYPE OIL FILTER

Extends life of hydraulic oil 3 to 4 times.

• SMOOTH 2-PUMP PRESSURE CONTROL

Dual high pressure and volume pumps work together to close press. Variable delivery high pressure pump eliminates pressure variation during curing cycle.



20 daylight Standard Columbia Hydraulic Hot Plate Press, open, for producing 4' x 8' panels.

Columbia
DIVISION
THE LODGE & SHIPLEY CO.
HAMILTON 5, OHIO

VALUABLE NEW LITERATURE for LOGGERS—LUMBERMEN—PLYWOOD & HARDBOARD MEN

Send for this idea-packed, money-saving FREE INFORMATION

New Lifting Crane. Baldwin-Lima-Hamilton Corp. announces availability of descriptive bulletins covering the recently introduced LIMA Type 703-SC lifting crane, available on crawler, truck or wheel mount. On crawlers, the new unit has a lifting capacity of 50 tons at 12-ft. radius with a 50-ft. boom. Circle No. 1.

Far Saving Space in a car or truck, the General Electric Mobile Radio Combinations MC 2-N (Narrow Band) and MC 2-W (Wide Band) are made to order. A new 2-page, 3-hole loose leaf insert with complete description and specifications on both the transmitter and receiver has just been issued. Circle No. 2.

Many Wheels Discussed in a new 28-page catalog describing the Norton Co. line of reinforced resinoid grinding wheels. It is liberally illustrated, contains typical application photos, tables of wheel sizes, prices, operating speeds and other data. Scores of portable grinding operations are listed together with the recommended wheel specification. Circle No. 3.

Easy To Install. "Oilgearducers" . . . packaged hydraulic drive output units consisting of Oilgear's constant displacement axial piston motors integral with Falk's complete line of concentric and right angle all-steel reducers are described in a new 8-page bulletin (50610). "Specs" cover complete variable speed drives with and without the Oilgearducers. Circle No. 4.

Here Is the Answer to industry's demand for a sturdy sawmill carriage for fast accurate sawing with one-man operation and minimum maintenance, at an attractive price. It is the engineer-designed carriage (up to 68" opening) built by Sumner Iron Works for both fir and pine mills. It is light and built for speed and has many new features. For more information Circle No. 5.

Newly Expanded Line of Morse Taper-Lock stock sprockets is described in an 8-page catalog (C56-54) now available. In it, Morse Chain Co. lists sizes and prices sprockets with a hub on one side (sizes 1½, 1¾ and 2"). For your free copy circle No. 6.

"Very Efficient Unit." That's what one user calls the Marathon Portable Gangsaw described in a new 4-page bulletin. Sawmill men will appreciate the close-up photos and line drawing of this gang, which is designed for small operations. It saws either round logs, cants or both. Circle No. 7.

New Pacific-Western 200 Transmission. An informative 2-page circular with illustrations of the new "200" transmission for yarders and cranes is available. One page is devoted to line drawings of the unit. Circle No. 8.

Anyone in Logging, lumbering, road construction or heavy materials handling will find value in a new 48-page catalog just published by International Harvester Co. describing their complete line of industrial power products. Sections include coverage of tractors, earth carriers, scrapers, bulldozers, Drott Skid-Shovels and various power units. Technical data has been streamlined, yet there is abundant descriptive material on each piece in the entire equipment line. Circle No. 9.

Heavy Duty Maintenance Paint—A new 4-page brochure describing Thermalite high heat aluminum paint for metal surfaces, heated to temperatures ranging from 400 to 1000 degrees F., is available by circling No. 10.

You Can Start a Catalog of Henry Disston & Sons major product lines now with two new sections on woodworking products and cutter heads. In the near future two other sections will be available and can be added to others, namely metal cutting products and files. For the first two free sections issued by this famous manufacturer of saws and other equipment, circle No. 11.

Most Accurate Setworks on the market, also the fastest. That is the claim made for Filer & Stowell No. 3 Air Motor Set Works with single lever control. A new 2-color 6-page leaflet issued by Filer & Stowell completely illustrates all design features of the set works. All power set works may be furnished with air motor, electric or rope drives. Circle No. 12.

Paid for Itself the First Day! One user made that statement about the new "Hydra-Wedge" manufactured by Hufford Machine Works Inc. This device is inserted in the saw cut; an easy pumping action then wedges the tree over and with less danger to the faller. For more details on this valuable woods tool, just circle No. 13.

"Sawmill Savings" is the title of a recent Caterpillar publication urging sawmill operators to match the power to their needs. This 8-page booklet discusses methods for getting "more profits out of less pay" and contains vivid photos of "Cat" diesels at work in log-

Circle numbers and mail this card for free literature on new products and services

→

To get further information on any item described in the Production Equipment Preview:
1—Note the number of that item.
2—Circle the corresponding number on the PEP card at the right.
3—Mail (no stamp needed in U. S.).
4—Foreign readers: affix proper postage.

PLEASE PRINT

This card may also be used to subscribe; fill in here

→

See other side for complete rates

AUGUST, 1954 NOT GOOD IF MAILED AFTER OCTOBER 25, 1954

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24	25	26
27	28	29	30									

Also send further free information on the equipment advertised on page:

..... ; Product ..... Manufacturer .....

..... ; Product ..... Manufacturer .....

Name ..... Title .....

Company .....

Address .....

Use this section to subscribe only

☐ New Subscription
☐ Renewal
☐ 1 yr. $3
☐ 2 yr. $5
☐ 3 yr. $7

Name ..... Title .....

Company .....

Address .....

.....

ging camps all over the country. A complete list of "Cat" engines with hp and kw ratings is included. Circle No. 14.

More Accurate Gang Ripping with the Diehl Multi-Rip Saw Model No. 98. The hows and whys of faster, easier and safer rippings are found in a handsome new 8-page booklet just issued by the G. M. Diehl Machine Works. Fifteen special features are pictured and described, and complete "specs" on the multi-rip are included. Circle No. 15.

A "Must" for Dragline Buckets Users is ESCO's new 28-page Replacement Parts catalog. It lists such parts for any make or model of dragline bucket and contains information of value to the owner or operator of any make or model of dragline bucket. There also are listings on several new products such as ESCO hinge repair links for drag chains. Circle No. 16.

Handbook of Basic Facts on field warehousing has been prepared by Douglas-Guardian Warehouse Corp. of New Orleans. This booklet "Financing the Modern Way" includes the entire text of Uniform Warehouse Receipts Act and tables showing amounts of additional loans which may be allowed by law in the various states when backed by receipts. Circle No. 17.

How To Control Dust in the production of furniture, patterns, shipping crates, pallets and many other wood products is told in a new bulletin issued by American Wheelabrator & Equipment Corp. Several illustrations describe how specific pieces of woodworking equipment are hooded and how duct work carries the dust away to the collectors. Circle No. 18.

A Rooter For D-8 "Cats"—The ATECO Rock Ripper, a new root-cutting blade capable of penetrating 30# below ground level and cutting roots a foot in diameter, has been developed by American Tractor Equipment Corp. Complete information on this Ripper can be obtained by circling No. 19.

If You Need Maneuverability in a medium size rubber tired tractor that will keep up units of larger size, you'll be interested in a folder by Caterpillar featuring the new 150 hp Cat DW15. Included are cutaways and photos of engine, transmission, clutch and a detailed "spec" sheet. Circle No. 20.

How Air Valves Work. Three fundamental types of air control valves are described and illustrated in a new 4-color 12-page booklet published by Ross Operating Valve Co. It explains the primary advantages of airpower. The three models are the integral pilot operated valve, the remote controlled and the direct operated. Circle No. 21.

Pays for Itself Quickly. The Marion Mfg. Co.'s "Mule" conveyor rapidly elevates materials of all kinds, including lumber, insulation board, wood work, wood forms and many others. It features a telescoping carriage adjustable to many lengths. For a free copy of the Mule 4-page brochure, circle No. 22.

If You Need Cash to help your operation carry logs, lumber or plywood or to make needed plant repairs or installations or for timber or for customer credit, you will want to get acquainted with Walter E. Heller & Co., who specialize in financing for industry. All inquiries treated confidentially. For full information, circle No. 23.

Help Eliminate Accidents through use of Bullard-Burnham safety hooks. The safety gate on these hooks closes automatically and is locked until released manually (by a touch of the finger). Hook sizes range from Nos. 2 through 16A; a return spring gate is available on these models. For a descriptive circular, mark No. 24.

Eliminate Overheated Roll Cases—It is possible with a Twin-Disc fluid coupling, which cushions out the heavy starts and load shocks inherent in handling heavy timbers in a sawmill. For Bulletins No. 144-C and No. 145-B describing these hydraulic units, circle No. 25.

Precision Engineered Planers—A record of many years of reliable, profit-making operation has been established by the famous Newman planers. Model No. 500 is a popular model planer; if you are considering buying a new machine you will first want to obtain full information on the "500." Circle No. 26.

Logging With "Dualoc" tractor logging chokers is the subject of a free bulletin issued by American Chain & Cable. First mentioned in this space in April, this interesting booklet is still available. Dualoc chokers has an always-open eye that fits easily on the arch line hook. For your copy circle No. 27.

Do You Log Heavy Timber?
A 16-page booklet "The Key to Increased Profit in Heavy Logging" has been published by the Hyster Co. for loggers owning or operating Caterpillar built tractors. Designed to show you how to get more profit from your logging, this free bulletin will be sent if you circle No. 28.

Do You Log Small Timber?
Another Hyster booklet entitled "How To Log Small Timber Profitably" is available at no charge. It shows cost-cutting ideas and applications increasing log production on small timber shows. Each logging method is treated separately. For a copy, circle No. 29.

Moore Dry Kiln Co. wants to send lumbermen and woodworking people everywhere a free copy of their 75th anniversary bulletin, which shows pictures of all the Moore plants plus a description of their line of wood seasoning and handling equipment. For your copy, Circle No. 30.

For Free Product Literature see other side

SUBSCRIPTION RATES:

(Including the Annual Review)

United States, Canada, Mexico and other Pan American Union Members

One year $3.00
Two years 5.00
Three years 7.00

Other Countries
One year $4.00
Two years 7.00

Forest Industries Directories:

Western (426 pages) $12.00
Southern (202 pages) 5.00

Combination Rates: 1 year subscription with directory—Western, $14.00; Southern, $7.00

FIRST CLASS
PERMIT No. 314
Sec. 14.9 P. L. & R.
SEATTLE
WASH.

BUSINESS REPLY CARD

No Postage Stamp Necessary If Mailed in the United States

Postage Will Be Paid by

THE LUMBERMAN

71 Columbia Street

SEATTLE 4, WASH., U. S. A.

Harris Pine Mills

(Continued from Page 83)

on the perforated steel plate in opposite direction to travel of logs, transports bark out end of barker building. The barker discharges into a similar conveyor, which also receives bark particles discharging from dewatering screens, leading into sawmill to main conveyor feeding into a Diamond 35 hog which converts the bark into suitable size fuel for plant boilers.

Chipping System Described

The modern chipping installations —also designed by Hansel—involved modifying sawmill conveyor systems so all by-product wood in sawmill (now bark-free) converges on a 16 in. conveyor belt leading to the new chipping facilities. This belt carries slabs, edgings and trims to horizontal-feed Hansel-Dunbar 66 in. 8-knife chipper which has feed speed of 216 lfpm. for ¾ in. chips.

The chipper, powered by 150 hp. 585 rpm. G. E. across-line starting motor, has overhead chip-discharge vanes attached to the disc and blows chips upward from chipper directly to a surge bin. Four Link-Belt H 6110 chains driven by two G. E.-Pacific gearhead motors transport chips from live-bottom bin to two 3x8 ft. L-B vibrating chip screens. On-size chips are separated from fines and oversize. All rejects drop onto a 12 in. belt conveyor which delivers directly to main powerhouse conveyor.

Accepted chips then enter a Rader conveying system by passing through a Rader (Pneumatic & Engineering Co., Ltd., Vancouver, B. C.) star feeder powered 3 hp. G. E.-Pacific gearhead motor. The feeder discharges chips to a 6 in. diameter pneumatic conveyor line leading 550 ft. to a rail siding for chip-car loading.

A 12x20 in. single-stage 2-impeller 2-lobe Sutorbilt (Corp., Los Angeles) compressor, powered by 50 hp. G. E. motor via 8-strand Gates V-belt, connecting to infeed end of the line provides a 6 psi. airstream which carries the chips throughout length of the line and loads them directly into the cars.

The pre-existing chipping system continues to convert dry by-product wood from furniture factory into chips. These enter the new system via a cyclone at surge bin between chipper and chip screens.

For first 150 ft. the pressure chip conveyor goes underground and then elevates high enough above ground level to clear rail cars. The chip-loading station consists of two adjacent railroad sidings, each with capacity for three cars. The loading section of the Rader conveyor consists of three chip-loading stations, each station for loading one car on each siding—the conveyor unit positioned between the sidings. Chips discharge directly into the enclosed cars via right-angle smooth-curve loading pipes (one at each loading station) equipped with deflector for placement of chips in the car.

Bridge Lumber Co. Barker

(Continued from Page 96)

barker.

Canadian Sumner Iron Works built the rolls, loader and kickers at Canadian White Pine; Heaps, Waterous the housing for the barker; Burrard Iron Works the heads. Steel Foundries supplied manganese log haul chain, and Burrard Iron Works the log haul frame; Letson & Burpee the steel log deck. A 72-in. Carthage 10-knife chipper was installed to receive logs from the barker.

SAVE ON YOUR CAPITAL INVESTMENT

TRIMMER
1—24' 0" Peters reconditioned selective Air Trimmer w/ infeed table, chains, motors, and starters.

EDGER
1—10"x84" Reconditioned Allis Chalmers Edger w/ 11 saws and 13 collars.

RESAWS
1—#285 Berlin 64" Band Resaw w/ 17 blades.

HOGS
1—#45 Reconditioned Diamond Hog

PLANERS
1—27 Wood, 6"x15" 4K used planer with jointer, 5 heads, hood and pipe to blower.

1—77A model 5 American used 8K belt driven planer w/ hoods, slip joints, spider, motor and feed table.

Slab Burner-Blowers
2 speed with totally enclosed 6 H.P., 440 volt, 3 phase motor.
$175.00 each

BLOWER
1—60 H.P. Sawdust blower (planer).

COMPRESSOR
1—315 C.F.M. Worthington V type air compressor, air cooled, w/ intercooler and 60 H.P. motor, V-belt, factory unit.

WINCHES
8—Garwood model 14B winches, 5 ton.

CRANE
1—30' span, 5 ton, shaw box overhead crane, 440 volt, 3 phase. Either hoist or motorized bridge may be bought separately.

We manufacture one of the better D. C. Drives—½ to 1,000 HP.
For: Sawmill carriages, edgers, planers, transfers, veneer lathes, trays, and any variable speed application.

DISTRIBUTORS FOR: Crocker Wheeler Motors • Falk Motoreducers & Couplings • Frick & Turner Mills • Arrow Air Filters & Lubricators
DEALERS FOR: Monarch Band Mills • Monarch Carriages • Nopak Air Cylinders • Wire Rope Corp. Cable • Whiting Electric Hoists • Cullman Roller Chain & Sprockets • Fafnir Ball Bearings

PHONE—WRITE—WIRE FOR PRICES

SAWMILL DIVISION
ZIDELL MACHINERY & SUPPLY CO

3121 S. W. Moody St., Portland, Ore. • AT 8691

MOTOROLA 41-V set mounted in damage-proof case on right fender of John Deere crawler tractor. Note that loud speaker is directed at operator to drown out tractor noises.

OPERATOR SPEAKS into microphone of Motorola 41-V two-way short wave radio set.

Tractor Radio Links Crew with Towers

Speeding up of radio contact between fire fighting crews and control tower or organization has been effected by a development whereby the set is carried on the fire line plow tractor, according to James E. Mixon, Louisiana State Forester. The development was worked out by Louisiana Forestry Commission personnel in Rapides Parish.

Custom has been to mount the two way short wave radio on the truck that carries the tractor to the scene of the blaze. After the tractor got on the job, a crewman had to return to the truck for subsequent contact to call additional help or for administrative purposes. This proved an important factor when the blaze required additional suppression crews.

Recently Communications Engineer Al Wendt, with aid of radio engineers George Waggoner and R. S. Bennett, successfully encased a Motorola 41-V radio in a weather proof and practically damage proof ten gauge steel cabinet and mounted it on the right fender of a John Deere crawler type tractor. Control heads and microphone are similarly protected. The antenna is mounted on the case. Four bolts are used to fasten the case to the tractor.

Power for operation is taken from either the tractor battery or truck battery. An extra set of controls in the truck provide for radio operation from that point. To change from one control to another, the wire is switched. The tractor motor will not start if the radio control wire is plugged into the truck.

Circuitous Freight Routings Wasteful

With the obvious adverse effect of insufficient car supply, the Committee on Car Supply of the West Coast Lumbermen's Association, and its Traffic Committee, have studied circuitous routings, which waste car days.

During the first four months of 1954, 3,768 box cars were installed, and 7,297 retired, with a net loss of 3,529 box cars. The number of box cars on order is approaching the zero mark, with only 7,598 cars on order as of May 1st.

With this in mind, application has been made by the West Coast Lumberman's Association to carriers, to tighten up the routing between Missouri River junctions, such as Minnesota Transfer, Omaha and Kansas City, on business moving to St. Louis, Chicago and Chicago junctions.

As the tariff on lumber to Eastern Territory now provides open routing between these respective junctions, specific routing up to the junctions is provided. Likewise, out of Chicago specific routing applies, in accordance with the routing guide. Routing guides are prepared and proposed to become effective in the far East, thus leaving only the section referred to without specific routing. Because the Commission has admonished the carriers in the past to tie in specific routing in connection with their rates, the application appears to be in line with good practice.

An example of a car moving, and the circuity involved, is indicated by a car routed to Kansas City, for movement, ultimately, through Chicago. It was actually routed Kansas City, MKT to San Antonio, Texas, thence T&NO to Shreveport, Louisiana, thence SLSW of Cotton Belt to St. Louis, L&M—C&NW to Chicago. Tabulated below are the mileages via this route.

Kansas City	to	San Antonio	
San Antonio	"	Shreveport	
Shreveport	"	E. St. Louis	
E. St. Louis	"	Benld, Ill.	
Benld	"	Chicago	

via	MKT	786.1
"	T&NO	437.5
"	SLSW	582.1
"	L&M	39.1
"	C&NW	303.5
Total		2148.3
Short line mileage		451

The distance from Kansas City to Chicago of 2148 miles is more than 4½ times greater than the short line distance normally used, or 451 miles.

The rail lines have docketed this matter for consideration. If routing is eventually checked out and made a part of the tariff, this phase of circuitous routing will be eliminated.

DOW BRUSH KILLERS simplify brush control on forest roadways

Brush control with Esteron Brush Killer or Esteron 245 minimizes danger spots on turns.

Chemical spraying keeps brush forced back to give full road width with better vision.

Esteron® Brush Killer and Esteron® 245, widely used to control brush and trees along logging roads, switchbacks, access roads and communication lines, greatly lessen the need for slashing and bulldozing. Where manual cutting is practical, spraying fresh-cut stumps with either of these hard-hitting Dow brush killers prolongs its effectiveness by keeping stumps from resprouting.

Esteron 245 is a straight 2,4,5-T ester formulation. Esteron Brush Killer combines the action of low-volatility propylene glycol butyl ether esters of 2,4-D and 2,4,5-T. Both have proved their worth in year-around basal bark spraying and frill application on hardwoods. You are invited to write for information on these Dow brush killers for easier maintenance of forest roadways and also for timber stand improvement by selective treatment of weed trees. THE DOW CHEMICAL COMPANY, Agricultural Chemical Sales Department, Midland, Michigan.

you can depend on DOW AGRICULTURAL CHEMICALS DOW

International TD24 with Twin Disc torque converter, gouges out rock on road construction project, with Bucyrus-Erie angledozer.

Tractor pioneering road work on Long-Bell Lumber Co., Vaughn Div. woods operations. Machine is equipped with Carco J drum.

New Tractor "Pours It On" In Duty

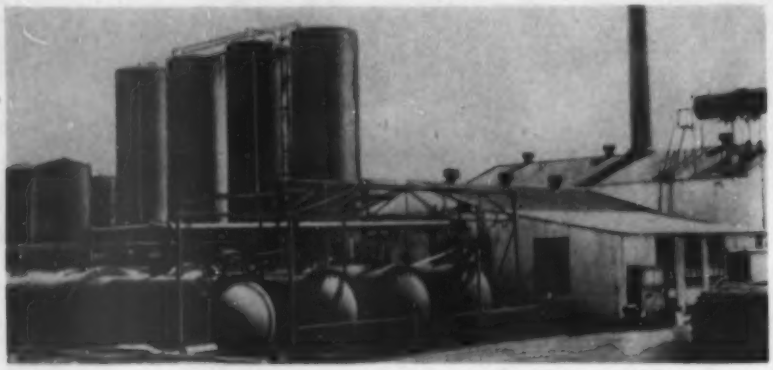
Perhaps the most recent start-up of new woods machinery is the TD24 International tractor equipped with Twin Disc torque converter which has been purchased by Vaughn Division, Long-Bell Lumber Co., Vaughn, Ore.

This unit—the first one sold by Howard-Cooper Corp., prime Pacific Coast distributor of International tractors—is being used on road construction for which it was obtained, according to Walter Andreassen, logging superintendent. He pointed out, while observing the machine shove its International (Bucyrus-Erie) angledozer deeply into the rocky road right-of-way, that regardless of machine speed the engine practically maintained its specified rpm's., started up smoothly and "really poured it on" when the going became difficult.

The operator, Dick Gutman, expressed his satisfaction by saying, "There's just no comparison—and it's lots easier to run than standard equipped models." After 115 hours of use, the clutch had been taken up but once. According to Gutman, "You practically forget the clutch." He also expressed satisfaction with the foot-operated decelerator which permits temporary slowing of engine without changing setting of throttle control.

The torque converter in this new production model TD24 is a 3-stage unit with two-speed transmission which, in conjunction with the planetary transmission, gives the tractor four speeds forward and four-speed reverse. The engine turns approximately 1600 rpm. and has flywheel horsepower rating of 200. This model has the characteristic TD24 two-speed drive to each track, extended 7-roller track and solid cast steel front idlers.

The Vaughn unit has Carco J drum and a Howard-Cooper built canopy over the operator, designed to hold up the entire tractor in case it should overturn.



Penta Cylinder Is Added

A new cylinder for pentachlorophenol, treatment has been added by the Dierks Lumber and Coal Co. at De Queen, Arkansas.

The cylinder is 115 feet long with an eight-foot diameter. It will step up Dierks' overall capacity over last year when it turned out 3,000,000 pressure treated fence posts, 100,000 poles and piling and large quantities of lumber.

Dierks is encouraging the use of pressure treated fence posts by providing long-time guarantees. Metal tags are attached to each post; round tags for creosote preservative and square tags for penta posts.

Dierks sales area is principally in 26 central and southern states from Texas and Louisiana to Canada and from Colorado and Wyoming to the East Coast. The company is largest producer of southern lumber and timber products in the United States.

From its nearly 2,000,000 acres of timberlands, Dierks produces 120,000,000 board feet per year, with an additional three million cubic feet of pressure treated poles and other materials. Its tree farm operations have attracted national attention because of the company's skill in establishing a most unusual forest management program while achieving a high degree of manufacturing skill and broad diversification of product lines.

Dierks began operating a pressure treating cylinder five years ago at De-Queen, Ark., to treat utility poles, fence posts and general construction lumber. Quadrupled treating business in that time has resulted in the installation of three additional cylinders at De Queen.

Tractor Men on Tour

Recent visitors in the Pacific Northwest on a tour of Caterpillar Tractor Co. dealers and operations were these company officials from Peoria, Illinois. From left, L. B. NEUMILLER, newly elected chairman of the board; COLLIS JOHNSON, president, Interstate Tractor Co., Portland, Ore.; GAIL SPAIN, vice-pres., Caterpillar Tractor Company, Peoria, Illinois

Announcing . . .

EXTRA advantages now available

with the Skagit SJ-4 Mobile Logger

1. **MORE POWER**
   Optional engines on drum set.
2. **SMOOTHER, FASTER OPERATION**
   Skagit 2-speed Air Shift Transmission and Torque Converter with bigger engine
3. **OPTIONAL DRUM SETS**
   Yarder-Loader combination unit
   or
   Loader only, at lower cost.
4. **HIGHER LOG-CROWNING BOOM**
   Standard for any SJ-4.

The Loader version is built the same as the standard model except that additional drums required for yarding are omitted. These drums can be added in the field to make it a Yarder-Loader combination.

Either unit is now available with optional engines on the drum set. A torque converter drive with Skagit 2-speed Air-Shift Transmission is provided with the bigger engine; a 4-speed Hand Shift Transmission is standard for the smaller power unit. These drives are interchangeable in the field.

For Complete Information On The Best SJ-4 Mobile Logger To Fit Your Operation, See Your Skagit Dealer Or Consult the Factory

SKAGIT STEEL & IRON WORKS SEDRO-WOOLLEY, WASHINGTON U.S.A.

GILLETTE CAN
CUT TIRE COSTS UP TO 1/3!

GILLETTE *DOES*
save loggers as much as 20¢ on every 1/M feet!

This amazing Gillette Super Traction tire is outperforming every other logging tire on the market! Enthusiastic reports from loggers prove it! And here are the reasons why:

- **Cut-resistant tread!**
  Special compounding minimizes cutting and snagging . . . 74% more undertread to absorb shocks.
- **Better bite—More pull!**
  Full-width grip . . . 68% more tread on shoulder . . . greater traction with "open center" design.
- **More miles!**
  Extra tread depth . . . load-moulded construction in DuPont Super Cordura Rayon or Nylon gives extra mileage, more and better recaps.

You can save too! Use Gillette Super Tractions, utilize Gillette's own tire maintenance recommendations. See your Gillette Distributor today and start hauling bigger profits with every load!

A Beam for Wear

GILLETTE TIRES
DIVISION OF UNITED STATES RUBBER COMPANY

Cells Measure Logs

Logs entering the J. Neils Lumber Co. sawmill at Klickitat, Wash. are measured for length just by incidental observation on the part of the deck-saw operator. The measuring system consists of two sections, one to either side of deck saw. To the pond side of this unit are three electric eyes with horizontal activating light beams directed across the log haul in such position that a log between light sources and photo-electric cells breaks the beams. One of these beams sets 16 ft. 4 in. from the saw, another 14 ft. 4 in. and the third one 12 ft. 4 in.

The other section of the measuring system lies on mill side of deck saw and consists of shadow-line markers, one 12 ft. 3 in. from the saw and the other 16 ft. 3 in.

A log entering the mill breaks all three light beams as it approaches the deck saw and continues to block them until the rear end clears the first beam—16 ft. 4 in. from the saw. This beam activates the photo-electric cell which in turns lights one of three lightbulb signals located in convenient position for operator visibility at opposite side of saw from the electric eyes. If the operator is to cut a 16-foot length (plus the 4-inch trim) from aft end of the log, he stops the log just as the signal lights. Or, if he wants a 14 ft. log from the aft end the log, it continues until the second signal light shows; or on to the third signal for a 12-foot section.

For bucking the lead end to specific length, the operator has objective indicators in the shadow lines set for 12 and 16 ft. plus trim. He allows the log to continue to first shadow line and stops it at that position when 12 ft. cut from lead end is desired. To cut 14 ft. length from lead end of a 26 ft. log (over-all length of which can definitely be ascertained by observing that the front end reaches first shadow line at time the 14 ft. signal light shows), he advances the front end past the 12 ft. shadow line and continues until the 12 ft. signal lights up. At that point the log would be stopped and bucked—resulting in 14 ft. front and 12 ft. rear log.

According to Sawmill Superintendent L. C. Wilson, this mill deck arrangement not only expedites convenient and accurate converting of logs to desired lengths, but provides continuous opportunity to check against insufficient trim, without guessing or carrying out measuring processes.

PRODUCTS RESEARCHERS meeting last month in Missoula include, left to right, TONY VEAZEY, ACM, Butte, sec.-treas.; SAM LEUTHOLD, Deer Park, Ind., chairman; LESTER CARR, nat'l. pres.; C. J. WARREN, Intermountain Lbr., Missoula; FRANK ROVSEK, nat'l sec.; and TED WERT, Thompson Falls Lbr., vice chairman of the section.

Inland Empire FPRS Hears National Head Tell Research Views

"After 33 years in the lumber industry, I believe that our greatest development is our work on new products," Lester Carr, national president, Forest Products Research Society, told the Inland Empire section, meeting in Missoula, Montana, July 15 and 16.

Carr, a lumberman from Sacramento, Calif., flew to the Missoula meeting in his Beechcraft Bonanza airplane. He is also chairman of the Western Pine Association's promotion committee and one of industry's leading exponents of a United front to promote sale and use of all wood products. He told the delegates, "We are only competing against ourselves when we promote the use of one kind of wood over another. In the meantime we find that some other product besides wood, such a metal, has taken over another portion of our market."

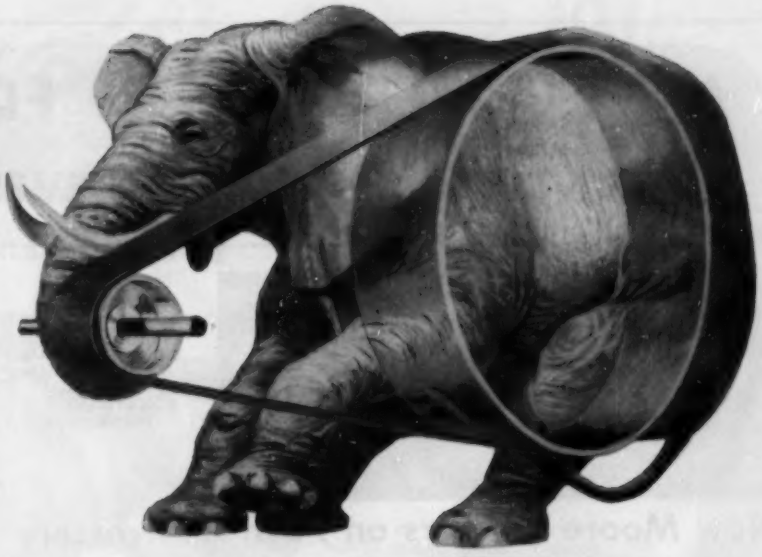
He stated that research in forest products and promotion should be very closely allied and believed that research on what the consumer wants is just as important as straight research on the product without taking the consumer into first consideration.

Serving as national president until the next FPRS national meeting in Seattle in 1955, Carr plans to visit every regional section during his term. Recently he flew in his own plane to a meeting at Myrtle Beach, South Carolina.

FPRS executive secretary Frank Rovsek of Madison, Wis., was on hand to tell Inland Empire members about plans for a national headquarters building to be built nearly 100% of wood and embodying the latest techniques of wood construction.

Technical program of the section meeting centered around recent developments in the sawmill industry in western Montana. Speaking on grade recovery in Engelmann spruce was Cameron J. Warren, Intermountain Lumber Co., Missoula. E. C. Wert, Thompson Falls (Mont.) Lumber Co., and Art Nelson, Diamond Match Co., Superior, told about their respective new sawmills, while Tony Veazey discussed packaging and handling methods at the Anaconda Copper Mining Co. mill at Bonner. W. H. Rambo, consulting engineer of Portland, Ore., told how the Montana State University recently converted from coal to hog fuel and sawdust in running their steam plant. He engineered the conversion.

Field trips were made by the group to the MSU steam plant and to Diamond Match Co.'s new Superior sawmill.



PULLINGRIP

G&K Leather Belting grips the pulleys for more production-power

It Grips — Like an elephant's trunk, leather's resilient, frictional surface firmly *grips* the pulley face, causing belt and pulley to move as one power unit.

It Pulls — Leather is strong, flexible, with controlled stretch — gives peak performance on *any* drive.

It's 3-Dimensional — Leather's millions of fibres are interlaced to form the tough *three-dimensional* structure so necessary for PULLINGRIP — *developed to the highest degree in G&K Leather Belting.*

Call your G&K Industrial Supplies Distributor for flat, round, link and V-belting, belt lacing, dressings, cements, packings and specialty leathers. Write for free Belting Catalog 101.

GRATON AND KNIGHT

Memo: Lumber Mill Superintendents

Three top G&K brands are meeting tough conditions on all types of machine in lumber mills: RESEARCH® premium quality for precision drives; HEART OAK for tough drives; SPARTAN® specially resistant to moisture and fumes. Ask your Distributor about G&K special Planer Belting.

GRATON & KNIGHT *Company*

WORCESTER, MASSACHUSETTS

World's Largest Manufacturer of Industrial Leather Products

MACHINERY AND EQUIPMENT

LATEST NEWS AND DEVELOPMENTS

(left to right)
CHAS. J. WILLIAMS
GORDON DUNCAN
WILLARD KELLEY
LLOYD EVANS
FRANK COOK

New Moore Officers on 75th Anniversary

At a meeting of the Board of Directors of Moore Dry Kiln Co. of Oregon held July 1, Gordon A. Duncan was elected president to succeed the late Joseph I. Steel. The directors also elected Willard R. Kelley, vice-president; Lloyd G. Evans, secretary-treasurer; and Franklin W. Cook, sales manager. Charles J. Williams was re-elected chairman of the Board of Directors.

The practical dry kiln experience of these five officers totals 141 years, which is a record of which the Moore Dry Kiln Co. is justifiably proud. These officers represent three generations of practical dry kiln experience to give maximum service to the lumber industry. Gordon A. Duncan, a forestry graduate of Oregon State College, joined the Moore organization in 1923. Willard R. Kelley joined the organization in 1926, Lloyd G. Evans in 1927, and Franklin W. Cook, a graduate of the College of Forestry at the University of Washington, in 1947. Charles J. Williams, who entered the organization in Florida in 1906, organized the Moore Dry Kiln Co. of Oregon and built the North Portland plant in 1918 with the assistance of the late Forrest Cobb. The late President Joseph I. Steel joined the Moore organization in 1922.

The Moore organization, originally founded by Lafayette Moore in 1879, is this year celebrating its 75th anniversary. This company is the world's largest manufacturer of drying equipment for seasoning forest products and has more than 7,000 installations of the modern Cross-Circulation Kiln Design in daily operation. The first practical Cross-Circulation Drying System was invented, patented and has been constantly improved by Moore engineers.

The Moore Dry Kiln Company is also the largest manufacturer of lumber stackers, unstackers, tilting hoists, electric transfer cars, electric swedes and other labor-saving equipment.

Moore Dry Kiln Company is also well known in the veneer and plywood field as manufacturers of Veneer Dryers and introduced during the past year the first direct heat gas-fired Cross-Circulation Veneer Dryer.

In addition to the plant at North Portland, Oregon, the Moore organization also has manufacturing services and engineering facilities at Jacksonville, Florida; Vancouver, B.C., Canada; and Brampton, Ontario, Canada. The Vancouver Iron and Steel Foundry Company, Inc. at Vancouver, Washington is operated by the Oregon company.

★ ★ ★

Going Into the Chip Business

Bridge Lumber Co., managed by J. R. Hecht, on Lulu Island, south of Vancouver, B.C., is installing a Bellingham type barker, a Norman chipper and vibrating chip screen, all supplied by Canadian Sumner Iron Works, and plans to ship the chips to the Port Mellon pulp mill of Canadian Forest Products, Ltd.

★ ★ ★

ONE OF TIDE WATER'S new tankers, the S. S. Flying-A-California, is shown here just after launching. It joins a growing fleet of petroleum carriers recently expanded by addition of S. S. Flying-A-Delaware.

Supertanker Delivered to Tide Water Associated Oil

The S. S. FLYING-A-DELAWARE, a supertanker capable of carrying 200 thousand barrels of petroleum products, has been delivered to Tide Water Associated Oil Co. The tanker is the second of twin tankers to be delivered this year by Newport News Shipbuilding & Drydock Co. for service with Tide Water Associated and was the third tanker launched this year of four being built for the company.

The keel for the S. S. FLYING-A-DELAWARE was laid December 7, 1953. The vessel was launched on May 3, took its trial run on June 29, and will enter the company's regular Gulf of Mexico and Atlantic Ocean run. The home port of the DELAWARE will be Wilmington.

The DELAWARE'S sister ship, the FLYING-A-NEW YORK, was launched at Newport News in February and is now in Atlantic coastal service. A third ship, a specially-designed tanker with a 131,000 barrel capacity for use in transocean and coastal runs in the Pacific, was launched May 10 at Baltimore, Md. Christened the S. S. FLYING-A-CALIFORNIA, the tanker is 514 feet long and is of 16,000 deadweight tons. The fourth tanker, the CALIFORNIA'S sister ship, will be launched July 29 at Baltimore.

Goodrich Chief Boosts Expanded Highways

RUBBER TALK—Seattle executives of the B. F. Goodrich Co. are shown as they met recently with ARTHUR KELLY, Akron, Ohio, president of the BFG tire & equipment division. Kelly was on an inspection tour of B. F. Goodrich operations in the west. Above, left to right, as they attended an interdivisional gathering with Seattle staff members at the Olympic hotel, are P. R. WINEMAN, W. G. ZINK, L. T. GREINER, KELLY, C. E. NEWMAN, and L. E. AASEN. Greiner is Pacific zone manager of replacement tire sales from Los Angeles. Mr. Newman is Seattle's branch manager. Mr. Kelly said that "expansion and extension of our present highway system is essential for our continued economic growth and progress as a nation."

ACCURATE to 1/64 INCH

Side view of
KLAMATH MACHINE SET WORKS

In addition to its precise accuracy, the KLAMATH MACHINE Set Works is widely adaptable—it can be installed on any rack and pinion carriage. You have a choice of 3 different drives: (1) Electric Motor Driven Friction Drive, (2) Electric Motor Drive, (3) Air Motor Drive. Other advantages—which are many—are clearly described in our *new* CATALOG.

A copy of this *new* CATALOG will be sent to Sawmill operators on request. The CATALOG is the result of many months of careful preparation—to furnish information of value to Sawmill men.

KLAMATH MACHINE & LOCOMOTIVE WORKS INC.
P. O. BOX 988 • KLAMATH FALLS, OREGON, U. S. A.
Look for the Indian Head on all **KLAMATH MACHINE** *products*
Export Division: FRAZAR & HANSEN, Ltd.
301 Clay Street, San Francisco 11, California, U. S. A.

Originators of the Practical and Time Tested MOORE *Cross-Circulation* DRYING SYSTEM

More than 7,000 Moore Cross-Circulation Kilns have been installed since 1927. Investigate the drying results any of these kilns are producing and then let us give you information as to how this modern drying system will pay for itself in connection with your operation.

Moore automatically controlled kilns pay their way through reduced drying costs and faster, higher quality seasoning.

Moore Cross-Circulation Kilns at Tahoe Timber Co., Reno, Nevada. Note the combination of single and double track kilns, giving greater flexibility.

MOORE DRY KILN CO.

VANCOUVER, B. C. — JACKSONVILLE, FLORIDA
BRAMPTON, ONTARIO — NORTH PORTLAND, ORE.

Write our nearest office for complete information on the installation of new kilns—or remodeling of old kilns to the Moore System.

MOORE DRY KILNS
CROSS-CIRCULATION MOORE INTERNAL FAN SYSTEM

Machinery Men

. . . . in the news

CHARLES F. BANHAM, vice president of Western Gear Works, Lynwood, Calif., has been appointed a member of the National Board of Field Advisors to the Small Business Administration. He recently spent a year in Washington as chief of mech. power transmission branch, N.P.A.

RAY T. HANSON has been named western manager of the Borden Company's Chemical Division. He was most recently asst. mgr. of Borden's West Coast operations. He succeeds Wm. R. Moffitt, who recently became a vice pres. He is well-known in plywood circles.

★ ★ ★

Cliff T. Welsh, Tacoma, and **Myron Bird**, president, **California Saw Works**, San Francisco, recently were visitors at the newly expanded plant of **The Wapakoneta Machine Co.**, Wapakoneta, O., pioneer makers of machine knives. They are representatives for the west coast.

New operating head of the **U. S. Rubber Co.** mechanical goods division is **Chester J. Noonan**, who has been named exec. gen. mgr. of two divisions. He'll head conveyor and transmission belt and hose production.

★ ★ ★

E. LEO CURRY has been appointed sales manager of Edarer Engineering Co., 2931 1st Ave. So., Seattle. Curry heads up all sales activity of the firm with particular attention to industrial crane sales, a national market for Edarer cranes in late years. Well-known in industry, he has 25 yrs. experience.

WILTON G. SMITH has been promoted from the sales promotion department of Hyster Co. to manager of the New York export office at 90 West St., replacing A. E. "Al" Betts, retiring after 25 years' service. Smith has been with Hyster eight years in eastern United States.

★ ★ ★

District sales representatives of **Campbell Chain Co.** recently met in new head offices at York, Pa. **Geo. J. Campbell, Jr.**, announced a "Traction Klip" emergency clip that provides traction necessary to pull out of mud and snow.

Roy Fruehauf, president of **Fruehauf Trailer Co.**, recently was honored by Automotive Council of Los Angeles as the person "having done most during the past year for trucking and transportation."

★ ★ ★

HERB FENNER has been added to the sales staff of Wood Tractor Co., Portland, Ore., according to Roy Wood, president. Fenner has been active in construction for 30 years. Before joining Wood he was manager of the Rice Lake Branch of Drott Tractor Co., Milwaukee. Wood handles A-C.

FRANK PHILLIPS is a new addition to the Wood Tractor Co. sales staff, along with Herb Fenner. Phillips formerly was with Pacific Car & Foundry and also Loggers and Contractors' Machinery Co. He will be available for specialized service on Carco equipment.

★ ★ ★

Two Westinghouse Electric Corp. changes are announced. **Franklin H. Drew** has been appointed to the newly created post of Pacific coast service manager, headquarters, San Francisco. **J. N. Jones** is the new engineering and service manager at Salt Lake City.

Lumbermen and foresters the world over rely on LUFKIN measuring devices for accuracy and quality. Numerous styles of Log Rules, as well as many variations of Board Rules, Tree Tapes, Log Calipers, Lumber Gages, Cruiser Sticks, Folding Log Rules, and Steel Tapes, provide a choice that give you exactly what you want.

BUY LUFKIN TAPES • RULES • PRECISION TOOLS From Your Supply House

259 THE LUFKIN RULE COMPANY, SAGINAW, MICH.
132-138 Lafayette St., New York City - Barrie, Ont.

FREE BOOKLET

The Lufkin Rule Co., Dept. L, Saginaw, Michigan

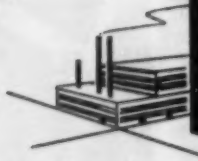
Gentlemen: Please send me your free 12-page booklet on Lufkin Board and Log Rules.

Name_____

Address_____

City_____ State_____

Better SHEET METAL WORK



to improve your plant's efficiency...

PLANNING • FABRICATING • INSTALLING

Manufacturers of
BLOWERS AND BLOWER SYSTEMS
DUST CONTROL SYSTEMS
DUST COLLECTORS AND REPAIR PARTS
CONVEYORS AND CONVEYOR LINING
STAINLESS STEEL PRODUCTS

Fabricated steel products to your specifications

AMERICAN SHEET METAL WORKS, Inc.
Manufacturers of Blowers
920 NE Glisan Portland, Oregon EAst 0111

Indair's Sparky answers the demand for ARGON ...the newest gas for inert-arc welding. ARGON is now a standard member on Indair's roster of industrial gases.

INDUSTRIAL AIR PRODUCTS CO.

PORTLAND, OREGON • SPOKANE, WASHINGTON
MEDFORD, OREGON • YAKIMA, WASHINGTON

Waukesha's **THE RIG!**

Almost any size engine for almost any kind of job. Gasoline, LPG and Diesel engines and power plants with ratings from 5 to 500 horsepower, available now!

Truck and Industrial Equipment Co.
7 N. E. OREGON STREET • PORTLAND 14, OREGON

PHONE NOW for more information
FI 8401

In the woods and on the road...

CHAMPION

FRICTIONS

Guaranteed frictions engineered and fabricated to each particular use . . . . . .

CHAMPION FRICTION CO.
EUGENE, OREGON
Phone 4-3353
Emergency Phone 4-7591

THE LUMBERMAN
GIVES ADVERTISERS
More Effective Readership

BLOWERS
BURNERS
SHEET METAL WORK

Designers, Manufacturers, Erectors

- Complete Blower Systems
- Dust Collecting Systems
- Conveyors
- Smoke Stacks
- Custom Steel Fabrication
- Rees Single & Double Wall Burners

Phone or write today for free estimates
Phone 3-1006
"Specialists in Blow Piping"

Medford BLOW PIPE CO. INC.
P. O. BOX 309 MEDFORD, OREGON

Machinery Men

. . . in the News

H. W. (Bert) Roberts, president and general manager of **Roberts Motor Co.**, Portland, Oregon, **Kenworth** distributor, recently returned from a visit to Australia, New Zealand and South Africa. One of the most interesting things he noted was the outstanding plantation-type tree farms in these countries. He noticed lots of pine, redwood and gum timber. According to Mr. Roberts there are a great many park and playfield areas in most of the cities he visited.

★ ★ ★

ROBERT E. YATES, '42 Oregon State College engineering graduate, joined The American Steel & Supply Co. in Eugene, Ore., June 16. Yates will take charge of sales and service of motors, generators, pumps, transformers, etc., a field in which he has gained extensive training and experience.

★ ★ ★

New v-p Sales for **The Jeffrey Mfg. Co., Columbus, O.**, is **J. E. M. Wilson.** Jeffrey hogs and shredders are made and sold by this company.

KENNETH O. WILLIAMSON is the new sales manager for Osgood - General's line of excavators and materials handling equipment. Consolidation of General Excavator Co. with Osgood Co. has not been completed, with transfer of all production facilities to the Osgood plant.

HARRY L. WHITE, appointed sales manager of the Autocar Division of The White Motor Co., Exton, Pa. Mr. White, a vice-pres. of Autocar Sales & Service Co., was former manager of the Pittsburgh Branch. White started with Autocar as a salesman and rose through many positions.

★ ★ ★

Mr. **F. C. Teckmyer, Jr.**, Vice President, Sales, for Ohio Gear Company of Cleveland, Ohio, recently visited their Pacific Coast dealers, J. W. Minder Chain & Gear Company in Portland, Oregon. J. W. Minder carry complete stocks of Ohio gears and speed reducers in Portland.

★ ★ ★

Mt. Baldy Lumber Co., Yoncalla, Oregon, recently took delivery of a brand new 30" Sundbo super log gang mill. This was delivered by Crown Machinery & Supply of Portland, Ore., who are distributors for Sundbo mills.

N. MERLE HARROD, president, The Wapakoneta (O). Machine Co., has returned from a trip to the west coast where he visited representatives of his company. He reported expansion and modernization of the Wapakoneta plant, including four electric salt bath furnaces for knives.

STANLEY B. McDONALD, president of Air Mac, Inc., Ore.-Wash. area distributor of material handling equipment, announces his firm is now handling the Towmotor Fork Lift Trucks and Tractors equipment line. Air Mac has stores in Seattle, Spokane, Yakima, Portland and in Eugene, Oregon.

★ ★ ★

Robert A. Neal, Pacific coast vice president of the Westinghouse Electric Corporation, retired April 30 after 44 years of service with his company. Mr. Neal, headquartered in San Francisco, has directed western operations of the company seven years ago.

★ ★ ★

ROBERT J. SUTTEN has been appointed treasurer and secretary of Atkins Saw Division, Borg-Warner Corporation, Indianapolis. The announcement, by Atkins president, Stanley J. Reush, also named Ellery Levitts assistant treasurer and Howard O. Wiesen assistant secretary.

The Marvelous Montgomery

BLO-HOG

Patents Pending

(The only all-purpose hog in the world)

Eats Up Everything!

C.I.T. Terms Available

. . . including Pine, Oak, Gum, Hickory, Elm, Cedar, Wet Veneer and Sandy Bark. Conveyor-fed — no attendant required. Positively protected from major damage by tramp steel. All connections locked — nothing to shake loose. Maintenance costs unbelievably low.

". . . Dear Mr. Montgomery: It is an unbelievable machine and it is still hard to believe that it is actually handling the enormous volume of scrap we are feeding into it. We operate the hog without an attendant — which means a considerable saving." — J. B. BLACK, Ocala Mfg. Co., Ocala, Fla.

Sumner Iron Works, Everett, Washington, W. Coast Rep.
Canadian Sumner Iron Works, Ltd., Vancouver, B. C. Canadian Rep.

Write for bulletin and details

JACKSONVILLE BLOW PIPE CO.

P. O. BOX 3687 - JACKSONVILLE, FLORIDA

JUST ADDED

4 More Dry Kilns. Our Capacity now 1¼ Million Bd. Ft. per Charge.

WE ARE ALL SET . . . To give your orders careful attention and prompt shipment . . . **WE NEVER STOP MANUFACTURING** Ponderosa and Sugar Pine from our own large resources . . . top quality kiln-dried interior trim, jambs, frames, incense cedar venetian blind slats, glued-up panels, cut stock, box shook . . .

What You Want, When You Want It.

Ralph L. Smith Is Your Dependable Source Of Supply.

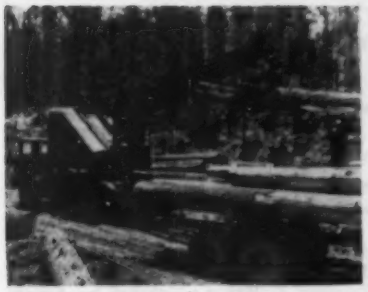
Mixed Cars to the Trade, Our Specialty

The Ralph L.
SMITH
Lumber Company

Mills at Anderson and Castella

Sales Office at Anderson, California

Sugar Pine • Ponderosa Pine • Douglas Fir
White Fir • Incense Cedar



Showing a new Peters heel boom manufactured by the Peters Company, Portland, Ore., on Osgood-General No. 312 ¾ yard log loader owned by Acme Timber Co., Estacada, Oregon.

Miracle Heel Boom

Acme Timber Co., with mills above Estacada, Oregon, early in 1952 needed a light, highly mobile unit to load logs in scattered locations. Some of the timber was in salvage operations, from rights of way and from small selective cutting stands. A small rubber mounted shovel type crane seemed to be the answer to their loading problems if they could get a light but adequate heel boom.

They could cut the large logs into short lengths but wished to handle smaller logs in lengths up to 50 feet. They took their problem and ideas to The Peters Co., pioneers in steel gooseneck heel booms, who built the first such device known for Stimson Lumber Co., Forest Grove, Oregon, back in early 1946.

The Peters Co. designed a light eighteen foot steel gooseneck heel boom for a ¾ yard general mobile crane for Acme's job that weighs only twenty-six hundred pounds but that has loaded logs up to 6½ feet in diameter and 20 feet long. They have since purchased two more of these booms.

The fairlead is mounted on a pedestal giving extra space to clear the tongs permitting the log to be raised almost up to the face of the boom. The outer end is sniped back at an angle to clear the line in all positions while dragging a log in to the crane.

New Bucyrus-Erie Distributor Serves Southern Georgia

Sim Grady Machinery Co., Macon, now offers sales and service on Bucyrus-Erie excavators and cranes in southern Georgia, according to an announcement by Bucyrus-Erie Co., South Milwaukee, Wis. The firm will handle the full Bucyrus-Erie line of ⅜- to 4-yd. convertible excavators and cranes, equipped with gasoline, diesel, or single-motor electric power; 15-ton and 25-ton capacity Transit Cranes; the truck-mounted all-hydraulic Hydrocrane and Hydrohoe, and Red Arch dragline buckets.

With headquarters at 1382 Guy Paine Road, P. O. Box 2158, Macon, the new distributor will serve a total of 81 counties.

Sim Grady, owner of the new distributorship, has had 18 years experience in the machinery business.

New Swivel Arch Line Hook

A new swivel arch line hook has been developed by the Anderson Steel Products Co., San Francisco, for tractor logging. It is distributed throughout California and Oregon by the Fred E. Barnett Co.

According to J. J. Nagy, production manager of Anderson Steel Products Co., the hook, which has patents pending, has a complete 360° swiveling action; keeps the arch line free from raveling and twisting, prevents premature failure of the arch line, distributes the load going over the fairlead of the arch preventing hook breakage; decreases line wear; and is relatively light and flexible, minimizing the effort of attaching the choker line.

According to the manufacturers the line will cut the loggers' costs, shorten work time and minimize effort.

HERE'S THE MURPHY Diesel group at the recent Redwood Region Logging Conference. As reported in THE LUMBERMAN, the machinery men at this conference staged a very outstanding display of modern logging equipment. From left, above, are JERRY OSWALD, LEO OSWALD and M. W. MARTIN of the Oswald Machine Works, and HORT JONES of the Murphy. Company home is Milwaukee, Wis.

PACIFIC BODY CONVERSIONS

MADE IN CONJUNCTION WITH YOUR 1/2-TON PANEL

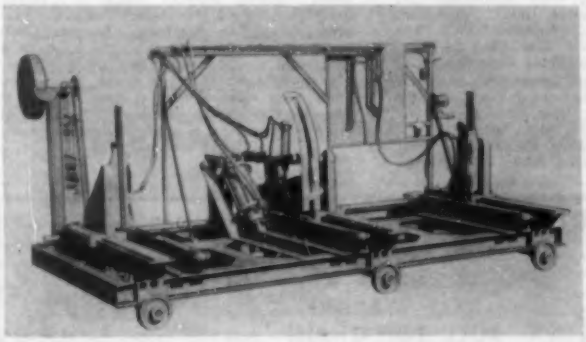
• Streamlined • Comfortable • Priced to fit your Pocketbook

• BUS TYPE SASH . . . smooth operation
• SUPER COMFORT, HIGH QUALITY SEATS
• CHOICE OF SEATING ARRANGEMENT

Contact your FORD DEALER
or PACIFIC BODY BUILDERS, Inc.
1812 N. E. GRAND AVE., TRinity 1128
Portland 12, Oregon

• 20% GREATER GLASS AREA
• FULL POWER VENTILATION

← Side Seating Conversion • Capacities up to 10 men and driver →



SALEM RIDERLESS CARRIAGES

ANNOUNCING . . . THE NEW SALEM PINE SPECIAL CARRIAGE

The Biggest, Littlest, Toughest carriage built.
Out performs carriages that cost twice as much.

Salem Equipment & Supply Co.
Earl R. Hitchman, Pres.
3455 D Street • Salem, Oregon
PHONES Days: 2-5561 Nights: 2-5481

SALEM EQUIPMENT CO. OF B.C. LTD.
Phone N.W. 3340
60 Brind St. • New Westminster, B. C.

PRODUCTIVITY* IS THE KEY TO SAWMILL PROFITS

MATER MACHINE WORKS
Modern Sawmill Machinery
Corvallis, Oregon

We can help you increase the Productivity of your mill

MATER CARRIAGES
Automatic: with boss dogs or tong dogs

MATER CONVERSION KITS
to mechanize your carriage

Automatic Decks

Mill Designers and Engineers

*Productivity—the number of board feet per man per day your mill cuts
A COMPLETE LINE OF SAWMILL MACHINERY FOR MILLS OF ALL SIZES

Equipment Deliveries

•A few of the many progressive producers in the forest industries who have new machines on the job.

Burnt River Lumber Co., Baker, Ore., replaced an older type 6-ft. band headrig with a new 8-ft. **Sumner** band in sawmill during Independence Day shut-down.

★ ★ ★

A new **Sumner Iron Works** chip screen and a 54" **Norman** chipper have gone into **Eureka Sawmill, Ltd.**, subsidiary of **Sereth Lumber Co.**, Nanaimo, B. C. Eureka plans a barker in the near future. Similar chippers have gone into **Western Forest Industries**, Honeymoon Bay, B. C.; **Bridge Lumber Co.** on Lulu I.; and **M. B. King Lumber Co.**, N. Vancouver.

★ ★ ★

Wolverine-Western Lumber Co., Burns, Ore., has installed edge and end gluing equipment for making wide select panels. Special machines include **Stetson-Ross** end-matcher and two straight-line rips, a **Mereen-Johnson** gang and a **Madison 202**. They expect to cut around 15 M bf of wide clear paneling per day.

A new **Blue Babe** 72" heavy duty band mill has gone into **Stanwood Lbr. Co.**, Drain, Ore. **Chuck Tarpening** of **Munnell & Sherrill**, Eugene, who supplied the mill, designed the transmission for it.

★ ★ ★

Flavel Cedar Co., Inc., Port Moody, B. C., has installed a 66" **Blue Babe** resaw. Another similar saw has gone into **Ross Hales & Sons Ltd.**, Edmonton, Alta., supplied through **J&R Sales Co.** there.

★ ★ ★

Eldorado Lumber Co., Klamath Falls, Ore., recently bought a **Kliever** stationary deck saw. **Loren Palmerton** is mill mgr.

★ ★ ★

Mutual Plywood, Samoa, Calif., has installed a **Raimann** veneer patcher with patch strip loader purchased through **E. V. Prentice Co.**, Portland, Ore. **Stevenson Plywood** of Stevenson, Wash., has put in a Raimann patcher, also bought via Prentice.

★ ★ ★

Another **Irvington** end printing and selective random length smooth-end trimmer installation—this one at **Kelson Lbr. Co.**, Bonners Ferry, Ida. The No. 61 end printer is designed for printing of grade or trademarking.

Recent installers of **Marathon Gang Mills** distributed by **Portland (Ore.) Machinery Co.** include **Yakima (Wash.) Lumber & Box Co.**, owned by **Frank Glaspey**. His mill burned down last winter and he has added a 20 x 20" Marathon gang for cutting cants of fir and pine. While it has increased production considerably, the gang mill needed no special foundations, because of its minimum vibration. Lumber of uniform thickness, all scant, is being provided, and the planing job is said to be a lot easier. A **Klamath Machine & Locomotive Works** band mill is the main headrig.

★ ★ ★

The **Flavel Cedar Co. Ltd.**, Port Moody, B. C., recently took delivery of a new 66" **Blue Babe** resaw.

Also, SD&S Lumber Co., Stevenson, Washington have added a Blue Babe pond saw. These were supplied by **Northwest Marine Iron Works**, Portland, Ore., who are the manufacturers.

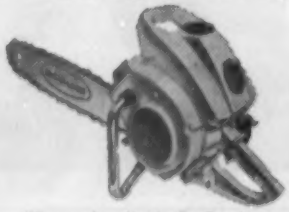
★ ★ ★

Schneider Lbr. Co., Klamath, Calif., have also added a 20 x 20" **Marathon** for redwood cants. **Sam Schneider** is owner.

★ ★ ★

Whiting Bros., St. Johns, Arizona, have also added a **Marathon** gang for cutting up their pine low grade cants into 1" boards primarily. They are also manufacturing some dimension with the gang.

McCulloch Model 4-30
Fastest Cutting One Man Saw



"Draw-bar" H. P. Rating
"Balanced" Lightweight
"Plus" Production

DISTRIBUTOR
Foster-McCulloch Co.
4190 Franklin Blvd., Eugene, Ore.
Phone 4-9542

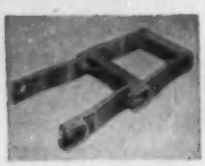
Oregon McCulloch Dealers Congregate

Shown herewith from front to rear, left row: Dick Mayfield (left), Foster-McCulloch Co., Eugene, Ore.; Jay Foster (right), President, Foster-McCulloch Co., Eugene, Ore.; Bob Moore, Corvallis Chain Saw Co., Corvallis, Ore.; Dick Orsborne, Orsborne Power Saw Co., Deloke, Ore.; George Calderwood, Loggers Chain Saw Co., Eugene, Ore.; Ves Carpenter (left), Waldport Saw Shop, Waldport, Ore.; Virgil Carpenter (right), Alsea Saw Shop, Alsea, Ore.; Howard Becker, Becker Bros., Mill City, Ore. Front to Back, Right Row: George Wright, Wright's Saw Shop, Florence, Ore.; Glenn Herman, Herman Motor Co., Toledo, Ore.; Don Wicks, Foster-McCulloch Co., Eugene, Ore.; Tom Matthews, Loggers Chain Saw, Eugene, Ore.; B. B. Barnum, B & H Equipment Co., Lebanon, Ore.; Wes Stringer, S & S Equipment Co., Cottage Grove, Ore. These men recently had a sales meeting at Foster-McCulloch Co., Eugene, Ore. They all use the same type of matching ranch wagon, or sedan pick-up truck.

"TOUGH ENOUGH TO TAKE IT" - - - PORTALLOY STEEL REFUSE CHAIN

PORTLAND CHAIN MANUFACTURING CO.
IN THE HEART OF THE LOGGING INDUSTRY
4000 N.W. Yeon, Portland, Oregon AT. 9219

NOW!
BALL BEARING
ROLL TOP CHAIN



A GENERAL APPRAISAL and GOOD INSURANCE

work hand in hand for GREATER PROTECTION

Accurate insurance coverage requires up-to-date knowledge of values. A General Appraisal provides actual current values on any property appraised... working hand in hand with good insurance for greater protection. We will welcome an opportunity of discussing the advantages of our service with you.

GENERAL APPRAISAL CO.

SEATTLE 408 Marion St.
PORTLAND 1727 N.E. 13th Ave.
LOS ANGELES 208 West 8th St.
SAN FRANCISCO 74 New Montgomery St.

Be SAFE Couple-Up with PREMIER HITCHES

***No. 480 Extra Heavy-Duty Solid Pintle Type**

- Locking mechanism fully enclosed and protected.
- Latch raises to open position automatically if locking is completed—IF LATCH IS DOWN IT'S LOCKED!
- Easy to operate with one hand—NO STRUGGLING TO ENGAGE OR DISENGAGE DRAWBAR.
- Simple to service—all wearing parts can be replaced without removing the hitch from truck.
- Fits 2½" Drawbar Eye—Weight 32 lbs.

***No. 380 Heavy-Duty Version of No. 480**

- Fits 2" Drawbar Eye—Weight 28 lbs.

*Both models approved for all highway uses by Oregon State Industrial Accident Commission.

Order from your dealer or write...

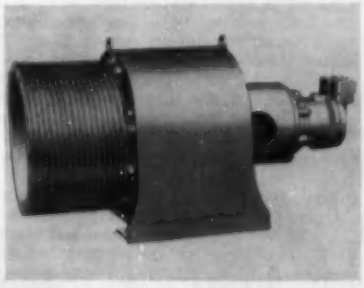
PREMIER MFG. CO.
943 N. RUSSELL • PORTLAND 12, ORE.

Hyster D9 towing winch.

Powerful Winch in Testing Stage

What is said to be the largest and most powerful winch of its kind is currently undergoing exhaustive field testing by Hyster Company engineers. This powerful towing winch has been designed especially for use with the much publicized, but not yet released for production, Caterpillar D9 Tractor.

Hyster Company, an allied manufacturer of the Caterpillar Tractor Company, has been working on this winch ever since development started on the new machine. Actual proving ground and field testing has been going on for the past 15 months. The new towing winch is said to have greater line pull than any other similar model and is of "matched design" to obtain peak performance from the tremendous power of the new Caterpillar D9.

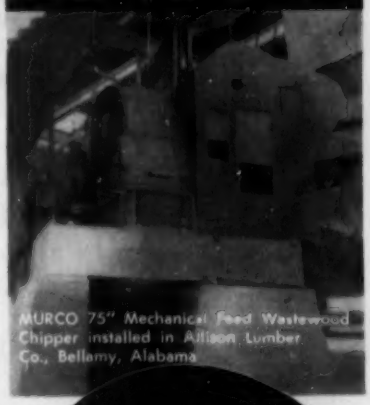


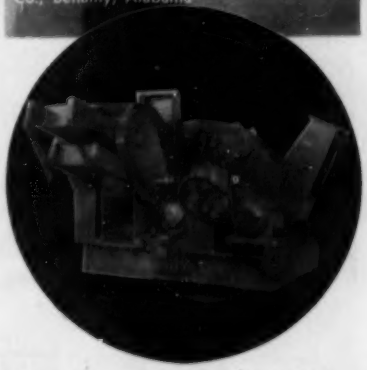
HERE IS A TYPICAL example of the combination by Oilgear and Falk to produce a unit for use in sawmills. It is the 20 hp Oilgearducer with Falk reducer and 20" diameter cable drum for a carriage drive.

Oilgear, Falk Combine Products in New Line

Oilgear's new line of type "H" fluid power, constant displacement, axial piston motors and Falk's complete line of concentric and right angle all-steel reducers are combined into a new line of integral "Oilgearducers", compact output units for Oilgear variable speed drives. Oilgear motors, in sizes of 1, 3, 8, 12 and 20 hp are flanged and resilient coupling connected to Falk single, double, triple and quadruple reducers with ratio combinations providing maximum output speeds from 1.7 rpm to 1170 rpm. Normally continuous operation output torques ranging from 42 lb-in to 41500 lb-in are based on a pressure of 1100 psi. Starting and peak torques for intermittent service can be up to 60% higher.

NEW





MURCO MECHANICAL FEED WASTEWOOD CHIPPER

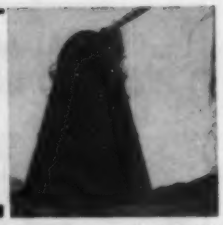
To help you get quality specification-size chips from slabs, edgings, round wood or veneer cores, this new MURCO Mechanical Feed Wastewood Chipper is designed to produce quality specification-size pulpwood chips from sawmill refuse. This 75" diameter 4-knife chipper has newly designed mechanical feed spout . . . the spout feed mechanism is synchronized to the speed of the disc to produce uniform size chips. Damping device utilizes all of the wood . . . slivers are held to a minimum. Capacity when operated at 500 RPM and set to cut ⅝" to ¾" chips is approximately 10 cords per hour. Overall dimensions 11'-5-7/16" long, 9'4" wide, and 7-4¾" high . . . weight 24,000 lbs.

- Can be driven by either electric motor or Diesel engine.
- Spout feed mechanism operates from reversible electric motor or power take-off, if Diesel operated.
- Spout feed mechanism is synchronized to speed of disc.
- Damping device utilizes all the wood . . . minimum slivers.
- Available with blower housing, if pneumatic chip conveying is desired.

Write for proposal and tell us size of largest slab or edging; volume of wood to be processed per hour; choice of drive and whether chips are to be pneumatically conveyed, and specie of wood to be chipped.

D. J. MURRAY MANUFACTURING CO.
Manufacturers Since 1883
WAUSAU • WISCONSIN

ANDERSON FABRICATED SAWMILL BURNERS
ARE FAMOUS FOR HI-EFFICIENCY
Vertical draft doors mean cyclonic action. Write today for details.
We Manufacture Complete Blower Systems
ANDERSON BLOWPIPE & MANUFACTURING CO., INC.
5960 4th Ave. So., Seattle 8, Wash., RA 4844 • 360 W. First Ave., Vancouver, B. C., FAirmont 5523



What's New With....

- **Manufacturers**
- **Distributors**
- **Suppliers**

FLOYD CRAWFORD

Howard-Cooper Corp. of California is expanding in Northern California. They have purchased the **A. J. (Tony) Gosselin Co.**, 2616 Broadway in Eureka and installed **Floyd Crawford**, former Albany, Ore., manager, as manager there. International Harvester tractor and heavy equipment sales and service will be handled there, covering Del Norte and Humboldt counties. **Wayne Robertson**, formerly branch manager for Howard-Cooper at Newport, Ore., will move to Crescent City, Calif., as sales representative for that area.

★ ★ ★

Universal Equipment, Inc., 4190 Franklin Blvd., Eugene, Ore., announce they have been appointed distributors in the Eugene area covering four counties where Tri-State tractor parts are sold. Replacement parts handled include rollers, track roller guards, clutch links, heavy duty fenders, track master pins, heavy duty solid rib idlers, sure seals for rollers and idlers.

White Motor Co. is now in new quarters at 2705 N. W. Nicolai, Portland, on a 2½ acre plot. **Dave Collins** is branch manager. Complete maintenance and repair facilities are kept for White, Autocar, Sterling-White and other makes. Service manager is **J. H. Howell**, Parts manager **Lou Warner.** Above men are longtime White men and expert in their line.

★ ★ ★

American Brakeblok has received the National Industrial Advertising Association second place award for excellence. Their program was designed to support sales efforts of field representatives.

★ ★ ★

Bucyrus-Erie Co., Publicity Dept., South Milwaukee, Wis., is offering for free loan a new 25-minute movie entitled **"These Users' Views."** If you want it for your country, send request to Mr. M. B. Jaeger at above address. Movie shows over 30 work shorts, including lumber, logs and road-building.

★ ★ ★

Harnischfeger Corp.'s welding division announces the new P&H model DA-200 arc welder offering both AC and DC welding in a single machine. It is now in volume production. It makes possible a change from one current to the other while welding to take advantage of the characteristics best suited for the work. Additional details are available from the company at 4605 W. National Ave., Milwaukee, Wis.

★ ★ ★

Link-Belt Co. has recently expanded west coast facilities by building a three-story addition to its San Francisco plant at 400 Paul Ave. The new space houses increased manufacturing, engineering and warehousing facilities and a factory branch store.

★ ★ ★

Formation of a new application division within the company's engineering department is announced by **N. C. Bremer**, chief engineer of **Morse Chain Co.**, 7601 Central Avenue, Detroit 10, Mich. The new division has been formed to meet application engineering requirements of the company's rapidly expanding lines of overload protection devices, cam clutches, and couplings and will be headed by **Ralph E. Cherry**, former executive engineer of the Morse Detroit plant.

L-M Equipment Co. has been appointed west coast distributor for **Nielsen Chain Grinder**, made in Winston, Ore. This is the unit that mechanically sharpens all make and models of chain saws where speed and accuracy are required. L-M is located at 401 S. E. Clay St., Portland, and 36 Fifth St., Eureka, Calif.

★ ★ ★

New Armstrong Sharpener

This new hand sharpener with a capacity for either rip or cut-off saws from 6 inches to 60 inches in diameter has just been announced by Armstrong Manufacturing Co., Portland, Oregon. The new sharpener is said to have several new design features that will allow more precision sharpening as well as cutting down on sharpening time. The machine is furnished complete for motor drive, with a ½ H.P. 110 volt, single phase, 60 cycle motor and starting switch as standard equipment.

★ ★ ★

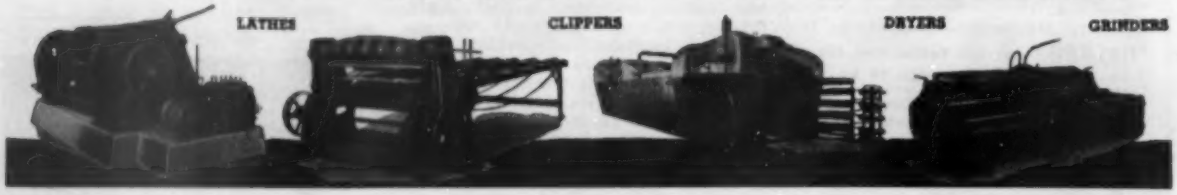
Organization of Mater Engineering Firm Announced

The organization of a new firm, MATER ENGINEERING, of Corvallis, Ore., has been announced by Milton H. Mater. An affiliate of the manufacturing firm of Mater Machine Works, Mater Engineering will specialize in engineering for sawmills and allied plants, design of plants and mills, and the supply of construction millwrights for Mater designed and built mills.

Associated with the new organization is Ray Shaw, Willits, California, who in the capacity of construction millwright for Mater Engineering is superintending the construction of Moraine Box Company's new mill at Magdalena, New Mexico.

Heading Mater Engineering is Milton H. Mater, Managing-Owner of the Mater Machine Works.

••COE VENEER MACHINERY••SUPREME SINCE 1852
The COE MFG. CO. 350 Bank St. PAINESVILLE, O.

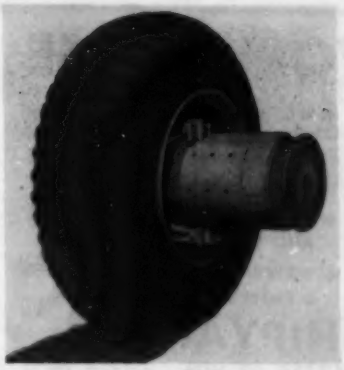


New Logging Equipment

Recent visitors on the West Coast were key executives of R. G. LeTourneau, Inc., Longview, Texas. In the party were R. L. LeTourneau, vice-president in charge of sales; F. G. Evangelist, export administrator; and Louis A. Flora, advertising manager. These three officials from Longview, Texas, joined the company's West Coast representative Vernon L. Smith, of Seattle, and together visited several logging shows in the Portland, Oregon area, and talked to many people in Portland, Seattle, and Vancouver, where the company is establishing distribution set-ups for its new line of electrically powered and controlled logging equipment.

No date has yet been set for delivery of this new line of logging machinery, but the company plans to have several of the new self-propelled logging arches and several other new types of logging equipment in the area this season.

A little over a year ago, R. G. LeTourneau, Inc., sold its earthmoving machinery business and entered new equipment fields. Now, however, new products are coming out of the company's Longview, Texas, and Vicksburg, Mississippi, factories. In the year since it quit the earthmoving equipment business, the company has: Introduced an entirely new packaged power system for heavy equipment—the Electric Wheel; opened a new field for contracting by marketing a fast-cutting, self-propelled Tree Saw and a companion Land Clearing Tractor; produced large-capacity Revolving Cranes and Jackknife Cranes for transporting as well as lifting multi-ton cargoes; developed the rubber-tired, trackless LeTourneau Train for transport of cargo and passengers across rough and and unimproved terrain; designed the LeTourneau Transporter in several models applicable to the logging and overseas development fields; and designed the LeTourneau Off-Shore Drilling Platform, a movable platform with electro-mechanically raised and lowered legs for use in water up to 100 feet deep.



The Electric Wheel is the heart of all LeTourneau electrically powered and controlled equipment. Inside the broad rim of the wheel, a high-torque LeTourneau motor is geared to deliver immediate driving power in either direction.

In the new Electric Wheel system, all wheels are drive wheels, each having its own powerful electric motor and gear reduction for immediate driving power in either direction. Each wheel is individually driven, steered, and braked. All other operating components of LeTourneau equipment, such as booms and winches, are driven by separate motors, with power provided for the entire machine by an engine-driven LeTourneau Generator.

President of R. G. LeTourneau, Inc., is R. G. LeTourneau, one of the country's outstanding industrialists. A little over a year ago the company which bears his name sold its earth moving line of equipment to a newly formed LeTourneau-Westinghouse Company. This subsidiary of Westinghouse Air Brake purchased from R. G. LeTourneau, Inc., the earthmoving manufacturing business and plants located at Peoria, Illinois, Toccoa, Georgia, and Rydalmere, Australia. Completely undisturbed by this sale were the manufacturing facilities of R. G. LeTourneau, Inc., at Longview, Texas, and Vicksburg, Mississippi.

Opens Spokane Office

H. E. Bovay, Jr., consulting engineer, is opening an office in Spokane, Wash., which is in charge of William N. Pauley. The firm's headquarters are at Houston, Texas. The firm is a Texas partnership. It has designed a number of the major sawmills in the south.

GENERAL MACHINE and ENGINE WORKS

Gang Saws • Presses • Lumber Pilers
Hydraulic Rams • Crankshafts
Monitors • Tenoners • Special Machinery

JOHNSON MANUFACTURING CO.
Fox and Holly Sts. • Seattle 8, Washington

ATKINS
CHAMFER CHAIN
for all chain saws

ATKINS SAW DIVISION
BORG-WARNER CORPORATION
INDIANAPOLIS 9, INDIANA

McDONOUGH
VERTICAL BAND MILLS
54" to 84"
. . . soon pay for themselves in sawdust savings alone. Better lumber produces more profits for you.

OTHER PRODUCTS INCLUDE
• Vertical Band Resaws
• Horizontal Band Resaws
• Carriage Dogs

Write for Information

McDONOUGH MANUFACTURING CO.
1502 GALLOWAY
EAU CLAIRE, WISCONSIN

It's a CINCH to bundle logs with SIGNODE STRAPPING METHODS

SIGNODE STEEL STRAPPING CO.
San Francisco • Portland • Seattle • Spokane

MARITIME WORKHORSE

★ WE ARE PREPARED TO GIVE PRICES ON THESE RUGGED WORKHORSES THAT WE BELIEVE TO BE UNBEATABLE.

★ AVAILABLE FROM 20 TO 87' AND WITH 10 TO 1000 H.P.

★ WRITE OR PHONE FOR A COST & PLAN SHEET.

MARITIME SHIPYARDS

2620 COMMODORE WAY • SEATTLE 99 WN. • GA 0024

Douglas Fir Prices

With most large mills in the Douglas fir region closed but with many small mills operating at full or augmented capacity, there is great confusion and wide range in prices. Following an increase in prices at the beginning of the strike, values subsequently dropped. The prices here quoted are probably far from actual values but in some degree reflect market conditions.

1x 6 #3 S2 or 4S KD	$55-57.00
2x #4 1 Dimension S4S KD	82-85.00
1x 4 B&Btr VG Flooring KD	160-170
1x 6 B&Btr Drop Siding KD	150-155
1x 6 B&Btr S4S KD	160-165
1x 8 B&Btr S4S KD	160-165
1x10 B&Btr S4S KD	170-175
1x12 B&Btr S4S KD	200-210

#1 TIMBERS AND PLANK

3x12 6-20'	$69-72
3x12 22-24'	77-75
3x12 26-32	77-79
4x4 6-20'	72-75
4x4 22-24	75-78
4x4 26-32	83-86
6x6 8-20	70-73
6x6 23-30	77-80
6x6 32-40	91-94
8x8 8-20'	66-69
8x8 23-30	69-72
8x8 32-40	76-79
6x10, 8x10, 10x10, 12x12, 8x20	66-69
6x10, 8x10, 10x10, 12x12, 22-30	69-72
6x10, 8x10, 10x10, 12x12, 32-40	76-79
Douglas Fir Cross Ties	54-57

#1 DIMENSION (Green)

2x4 6-24	$71-74
2x6 6-24	70-73
2x8 6-24	69-72
2x12 6-24	69-72

#2&BTR. BOARDS (Green)

1x4 6-20	$49-52
1x8 6-20	53-56
1x12 6-20	56-59

Southern Pine Prices

FOB. Mill	BB	G	D
1x4 Std. VG Fig.	$230.00	$210.00	$158.00
1x4 Std. FG Fig.	170.00	160.00	130.00

	No. 1	No. 2	No. 3
1x6 Std. Boards & S/L...	$135.00	$76.00	$64.00
1x8 Std. Boards & S/L...	137.00	81.00	69.00
1x10 Std. Boards & S/L...	140.00	81.00	68.00
1x12 Std. Boards & S/L..	170.00	98.00	69.00

No. 1 Dimensions S4S KD

	10	12	14	16	18	20
2x 4	$ 92	$ 92	$ 92	$ 95	$110	$115
2x 6	90	92	94	92	104	109
2x 8	92	92	92	92	105	110
2x10	112	112	113	112	125	130
2x12	132	132	132	132	142	147

No. 2 Dimensions S4S KD

2x 4	$ 85	$ 85	$ 86	$ 88	$ 98	$103
2x 6	79	81	81	81	83	98
2x 8	78	80	79	77	91	96
2x10	88	88	93	88	108	113
2x12	88	88	88	88	115	120

No. 3 Dimensions S4S KD

2x 4	$ 66	$ 68	$ 68	$ 70	$ 76	$ 81
2x 6	65	65	65	65	71	76
8x 8	67	67	67	67	73	78
2x10	68	68	72	68	73	78
2x12	64	64	64	66	77	82

Western Pine Prices

The following F.O.B. mill prices, based on Past Sales, were reported to the WESTERN PINE ASSOCIATION by members during the period 6/28 to 7/17 '54 inclusive. Both direct and wholesale sales are included and are based on specified items only. They are for dry surfaced lumber.

PONDEROSA PINE

	4/4 RW	5/4 RW	6/4 RW
SELECTS S2 or 4S	249.21	251.22	248.47
C Select RL	210.25	218.28	212.61
D Select RL	No. 1	No. 2	
SHOP S2S	137.12	106.18	
5/4	135.15	105.03	
6/4	No. 2	No. 3	
COMMONS S2 or 4S	116.82	70.87	
1 x 8" RL	119.08	69.13	
1 x 12" RL			
4/4 No. 4 Common S2 or 4S	49.88		

IDAHO WHITE PINE

	4/4 RW	6/4 RW	
SELECTS S2 or 4S	255.16		
Choice (C) RL	206.34	253.56	
Quality (D) RL	Colonial ($1)	Sterling ($2)	Standard ($3)
COMMONS S2 or 4S		144.82	110.15
1 x 8" RL		149.96	109.48
1 x 12" RL			
4/4 UTILITY ($4) S2 or 4S RW&L	58.61		

SUGAR PINE

SELECTS S2 or 4S	4/4 RW	5/4 RW	6/4 RW
#1 & 2 Clear RL	272.36	275.27	275.58
C Select RL	263.40	265.39	268.09
D Select RL	229.91	232.92	230.37
SHOP S2S	No. 1	No. 2	No. 3
5/4	141.78	107.97	76.69
6/4	143.23	108.03	73.88
8/4	160.99	122.13	74.90

LARCH-DOUGLAS FIR

4/4 No. 3 Common S2 or 4S	63.70
2 x 4 No. 1 Dimension RW & L	78.94
2 x 4 No. 2&Btr. Dimension RW & L	71.15

Log Prices—Columbia River

Douglas Fir Peelers: No. 1 $110; No. 2 $100; No. 3 $80.

Douglas Fir Sawlogs: No. 1 $60 to $62.50; No. 2 $47.50 to $52.50; No. 3 $37.50 to $42.50.

Hemlock: Peelable 52.50 to $55.00; No. 1 $47.50 to $50; No. 2 $40 to $42.50; No. 3 $37.50.

White Fir: Same as Hemlock.

Noble Fir: Peelers $52.50 to $60; Sawlogs: No. 1 $47.50 to $55; No. 2 $40 to $42.50; No. 3 $37.50.

Cedar: No. 1 $75 to $80; No. 2 $37.50 to $40; No. 3 $30 to $35.

Spruce: Select $80 to $85; No. 1 $50 to $60; No. 2 $40 to $45; No. 3 $37.50 to $40.

Douglas Fir Wood Logs: $10 to $12.

Douglas Fire Plywood

⅜" basis	$80-$85

Red Cedar Shingles

ROYALS			
No. 1	24"	4/2	$13.75-$14.00
No. 2	24"	4/2	7.00-7.50
No. 3	24"	4/2	4.00
Perfections			
No. 1	18"	5/2¼	11.50-12.00
No. 2	18"	5/2¼	6.50-7.00
No. 3	18"	5/2¼	3.75-4.00
XXXXX			
No. 1	16"	5/2	9.00-10.00
No. 2	16"	5/2	6.50-6.75
No. 3	16"	5/2	4.50-4.75

Mattison-Greenlee Open New Service Offices

The Mattison-Greenlee Service Corporation has established an office at 514 Bryant St. in San Francisco for the purpose of serving the woodworking industry in Central and Northern California and Nevada.

The Mattison-Greenlee Service Corporation office will have the exclusive rights for the woodworking machinery as manufactured by the Mattison Machine Works, Rockford, Illinois and Greenlee Bros. & Co., Rockford, Illinois.

At the present time, the personnel of the San Francisco office will consist of C. C. Dwelley and L. C. Mattison. Mr. Dwelley for many years was connected with the Turner Machinery Company and is widely known throughout the California territory.

L. C. Mattison has been connected with the Rockford sales office of the Mattison-Greenlee Service Corporation, and is fully acquainted with products of both Mattison Machine Works and Greenlee Bros. & Co.

WRITE FOR LIST OF USERS

REFUSE BURNERS

THREE TO SIX DAY ERECTION

HEAD PULLEYS - BEARINGS

CHAIN - FLIGHTS

FULL CONVEYOR DRIVE

FORK LIFT DUMP BOXES

RENTAL EQUIPMENT—Boom Trucks, Welding Machines, etc.

C & D WELDING SERVICE

P.O. BOX 1787 PHONE - 2478 REDDING, CALIF.

Be sure to read the latest **FOREST INDUSTRIES NEWS** section in each issue of **THE LUMBERMAN.**

AIR CONTROL VALVES
Russ Chamberlin Co., Portland, Ore.
Valvair Corp., Akron, Ohio

AIR MOTORS
Rogers Machinery Co., Portland, Ore., Seattle, Wash.
Salem Equipment & Supply Co., Salem, Ore.

ALUMINUM PIKE POLES
Alloy Welding & Fabricating Co., Portland, Ore.

APPRAISALS
General Appraisal Co., Seattle, Portland, San Francisco

ARCHES
Hyster Company, Portland, Ore

AXLES
Eaton Manufacturing Co., Cleveland, Ohio
Kay-Brunner Steel Products Co., Alhambra, Calif.
Timken-Detroit Axle Co., Detroit
Roberts Metar Co., Portland

BARKERS, LOG
Sumner Iron Works., Everett, Wash.
Hansel Engineering Co. Ltd., Seattle, Wash., Vancouver, B.C.
Nicholson Manufacturing Co., Seattle, Wash.
Soderhamn Machine Mfg. Co., Talladega, Alabama.
Globe Machine Works, Tacoma, Wash.

BEARINGS
Dodge Manufacturing Co., Mishawaka, Ind., San Francisco, Portland, Seattle
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Los Angeles
Shafer Bearing Co., Donners Grove, Ill.

BELTING AND PACKING
American Rubber Mfg. Co., Oakland, Calif.; Portland, Ore.
Gates Rubber Co., Denver, Colo.
Goodyear Tire & Rubber Co., Akron, Ohio
Graton & Knight Co., Worcester, Mass.
Raybestos-Manhattan, Inc., Passaic, N. J.; Portland, Seattle

BLOWPIPE SYSTEMS
American Sheet Metal Works, Portland
Anderson Blowpipe & Mfg. Co., Seattle
Ress Blow Pipe Mfg. Co., San Francisco, Cal.

BLUE PRINTING
Chas. Bruning Co., Inc.

BOATS—All Kinds
L. S. Baier & Associates, Portland, Ore.
Ilwaco Boat Works, Ilwaco, Wash.

BOILERS AND ACCESSORIES
Gabriel Fabrication & Erection Co., Portland, Ore.
Seattle Boiler Works, Seattle

BOOM BOATS
L. S. Baier & Associates, Portland, Ore.
Evinrude Outboard Motors, Milwaukee, Wis
Ilwaco Boat Works, Ilwaco, Wash.
Johnson Motors, Waukegan, Illinois

BRAKE BLOCKS AND LININGS
Champion Friction Co., Eugene, Ore.
World Bestos, Newcastle, Ind.

BRAKE DRUMS
Gunite Foundries Corp., Rockford, Ill., Portland, Ore., Seattle, Wash., Vancouver, B.C

BULLDOZERS
Baker Mfg. Co., Springfield, Ill.
Caterpillar Tractor Co., Peoria, Ill.
Howard-Cooper Corp., Portland, Seattle

CASTINGS—Iron, Steel and Brass
Electric Steel Foundry, Portland
Link-Belt Co., Seattle, Portland, San Francisco

CHAIN—Coil or Binder
Campbell Chain Co., York, Pa.
S. G. Taylor Chain Co., Hammond, Ind.

CHAIN—Steel Roller and Malleable
Chain Belt Company and Baldwin-Duckworth Division, Seattle, Portland, San Francisco
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Los Angeles Portland
Moline Malleable Iron Co., St. Charles, Ill.
Tacoma, Wash., Seattle, Portland, Los Angeles

BUYERS GUIDE AND CLASSIFIED SECTION

CLOSING DATE: 15 of the month preceding publication
71 COLUMBIA ST., SEATTLE 4, WASHINGTON

ADVERTISING RATES

Buyers Guide & Classified Section

Machinery, Camp and Mill Supplies, Etc. Wanted and For Sale, Mill and Plant Properties.

CLASSIFIED—(No Display)

12c a word. $5.00 minimum. $1.50 extra for Box Number
Positions and Help Wanted.

Professional Services AND DISPLAY CLASSIFIED

Less than 7 insertions	—$10.00 per column inch
7 insertions	— 8.00 per column inch
13 insertions	— 6.50 per column inch

No agency discount on Buyer's Guide advertising.

THE LUMBERMAN
71 Columbia St. Seattle 4, Wash.

SEATTLE REFUSE BURNERS
WITH CONE GRATES AND CYCLONE DRAFT TUBES BURN 25% MORE WITH 75% LESS SMOKE AND CINDERS FOOL PROOF 3 METHODS OF CINDER CONTROL

BOILERS — 5 TO 1200 H. P.
TANKS and STACKS
STRUCTURAL STEEL FABRICATORS
We Stock Straight and Bent Boiler Tubes
MFGRS. FLANGED AND DISHED HEADS
SEATTLE BOILER WORKS
5237 EAST MARGINAL WAY, SEATTLE, WN.
Phone: Day - RAinier 6737 • Night - DExter 1209

WALTER H. BEANE CO.
Sawmill Remanufacturing Machinery
Designs and Estimates
Plant Liquidation
214 Williams Bldg, Klamath Falls, Ore. - Phone 5144

FEDERAL PIPE & TANK CO.
Wood Pipe
2 inches to 16 feet diameter.
Wood Tanks
100 gallons to 500,000 gallons capacity.
6851 East Marginal Way
RA. 0582 Seattle, Wash.

WHISTLE SIGNALS
The most practical whistle for all normal uses. Larger sizes with deeper tones for special applications.

SIZE 1-A WHISTLE WITH ELECTRIC VALVE
Cunningham Air Whistles
4200 WEST MARGINAL WAY • SEATTLE 6, WASH
"WHISTLING FOR OVER 30 YEARS"

USED Straddle Trucks for package sizes 42"x42" to 54"x54" and Lift Trucks
a good selection of HYSTER and other makes.
HYSTER Sales Company
2105 S.E. 7th, Portland 14, Ore.
Telephone FILmore 6471

TERMINAL SALES BUILDING

OREGON'S LUMBER HEADQUARTERS

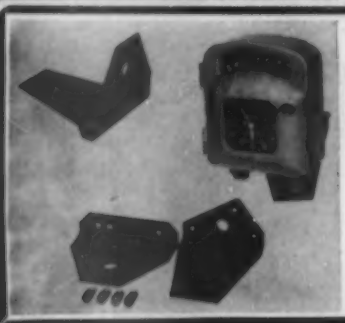
LUMBER AND AFFILIATED TENANTS

Associated Loggers
Astoria Plywood Company
Baker Detroit Lumber Co.
Bradley Lumber Co.
Chapman Chemical Co
Cimarron Lumber & Supply Co
Collins Pine Co
Columbia Harbor Lumber Co.
Cutler, Fred S. & Co.
Daniels, Wm. C.
U. S. Epperson Underwriting Co.
Graham Paper Co.
Gaylord Container Co
Edward Hines Pacific Coast Lbr. Co.
Hammond Lumber Co.
Huddleston Lumber Co.
Ray M. Janin Lumber Co.
Leigh Lumber Company
D. M. McClintock Lumber Co
Ostrander Lumber Co
Peskill Lumber Co.
Patrick Lumber Co.
Steinbrenner Lumber Co
Arthur E. Smith Adv. Agency
Taylor Lumber Sales Co.
Tompleton Lumber Co.
Valentz Lumber Co.
Weyerhaeuser Sales Co.
E. K. Wood Lumber Co.
K. B. Wood Forest Engineer
Canadian National Ry.
Delaware Lackawanna R. R.
Grand Trunk Railway System
Gulf, Mobile & Ohio R. R. Co.
Illinois Central Railroad
St. Louis San Francisco Ry.
Valley & Siletz Railroad Co
Water-Pel Paints, Inc.

TERMINAL SALES BUILDING AGENCY, Portland, Oregon BEacon 3555

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.



New for Sangamo Tachograph

UNIVERSAL 2-piece HEAVY DUTY steel, mounting bracket kit #R1000. Easy to install—saves time.

Mount on top, front or bottom of panel.

Service distributors for Sangamo and all standard makes of speed indicators and gauges.

COMPLETE STOCK AVAILABLE
SERVICE WITHOUT DELAY

INSTRUMENT SALES AND SERVICE

803 E. Burnside St. Phone FI-7327
Portland, 14, Ore.

CUT YOUR LOGS WITH PRECISION AND SPEED
Eliminates Waste

Pat. Applied For

KLIEVER

DECK SAW has 12" of travel for centering saw to the log lengthwise.

For Complete Information Write Manufacturer

KLIEVER MACHINE SHOP

130 N. FRONT MEDFORD, ORE.
Phone 2-6435

PRESERVE THE LIFE OF YOUR
ARBORS, BED PLATES, LATHES AND PLANER KNIVES, CUTTER HEADS, GUIDES WITH HARD CHROME
Specialists in Precision Hard Chrome Plating

SILVER CHROME BRONZE CADMIUM NICKEL
GOLD BRASS TIN also and ZINC

CALIFORNIA PLATING WORKS, INC.

405 N.W. 16th Ave., Portland, Oregon Phone ATwater 4478

Established 1907 *Our Work is Approved by All Government Services*

PACIFIC CARBIDE SAWS

Made in the West . . . .

Pay FOR THEMSELVES WITH SPEEDED UP PRODUCTION

SMOOTHER CUTTING . . . LESS DOWN TIME
LESS SHARPENING COSTS . . . PROMPT SERVICE
ASK US FOR DETAILS

Our products are guaranteed against defective materials and workmanship

PACIFIC SAW AND KNIFE CO.

910 S. E. Stark Street • Fillmore 5463 • Portland 14, Oregon

We Solicit Quotation Inquiries on Bits and Shanks
We Are Also Manufacturers of Pacific Chrome Bits and Shanks

Northwest Chains and Sprockets, Inc., Seattle, Portland
Peoria Malleable Castings Co., Peoria, Ill.; Portland, Ore.
Portland Chain Mfg. Co., Portland, Ore.

CHAIN SAWS—SEE POWER SAWS

CHAIN SAW SHARPENERS
Nielsen's Power Saw Shop, Winston, Ore.

CHAINS, TIRE
S. G. Taylor Chain Co., Hammond, Indiana
Campbell Chain Co., York, Pa.

CHROME PLATING
California Plating Co., Portland, Oregon

COATINGS—KILN & ROOF
The Gorton Co., Portland, Ore.

CONVEYORS—Portable
Mathews Conveyor Co., Portland, Seattle San Francisco and San Carlos, Calif.

CONVEYORS—Steel
Archer Blower & Pipe Co., Portland, Ore

CRANES—INDUSTRIAL
Western Machinery Corp., Portland, Ore

CRANES AND SHOVELS
Bucyrus-Erie Co., Seattle, Portland, So. Milwaukee
General Excavator Co., Marion, O.; Seattle
Harnischfeger Corp., Milwaukee, Wisconsin, Seattle, Wash., Los Angeles, San Francisco, Calif.
Lima Locomotive Co. (Shovel and Crane Division) Lima, Ohio; Seattle, Spokane, Portland, Vancouver, B. C.
Link-Belt Speeder Corp., Chicago, Ill., Seattle, Portland, San Francisco
Northwest Engineering Co., Chicago, Seattle, Portland, San Francisco
Osgood-General Co., Marion Co., Seattle, Portland, Oakland

CREOSOTED STAVE FLUMES & CULVERTS
Federal Pipe & Tank Co., Seattle

ELECTRICAL EQUIPMENT—Motors, Wire, etc.
General Electric Co., Schenectady, N. Y.; Seattle, Portland, San Francisco, Los Angeles
McPheeters Electric Co., Eugene, Ore.
Skeen Electrical Works, Portland, Ore.
Westinghouse Electric Mfg. Co., East Pittsburgh, Pa., San Francisco, Calif., Seattle, Wash., Portland, Ore., Los Angeles, Calif.

ELECTRIC FEEDWORKS
Skeen Electrical Works, Portland, Ore.
Zidell Machinery & Supply Co., Portland, Ore

ENGINES—DIESEL
Caterpillar Tractor Co., Peoria, Seattle, Portland, San Francisco
Cummins Engine Co., Columbus, Ind.; Portland, Seattle
Chrysler Corp., Detroit, Mich.; Seattle, Portland, San Francisco
General Motors "Series 71," Detroit, Seattle, Portland, Stockton, San Francisco, Los Angeles
International Harvester Co., Chicago, Portland, Seattle, San Francisco
F. Perkins (Canada) Ltd., Toronto, Canada
Precision Engineering Co. of Sacramento, Calif.
Murphy Diesel Co., Milwaukee, Wis.

ENGINES—GAS
Ford Motor Company, Industrial Engine Division, Dearborn, Mich.

ENGINEERS—FORESTRY & MILL
Walter H. Beane Co., Klamath Falls, Ore.
Johnson & Johnson, Chicago, Ill., Houston, Texas, Portland, Ore.
Herbert Fryer, Carnation, Wash.
Peter Koch, Seattle, Wash.
W. H. Rambo, Portland, Ore.

ENGINEERS' SUPPLIES
Chas. Bruning Co., Inc.

EXPLOSIVES
E. I. DuPont de Nemours & Co., Inc., Wilmington, Del.; Seattle

FANS AND BLOWERS
American Sheet Metal Works, Portland
Anderson Blowpipe & Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland, Seattle
Rees Blow Pipe Mfg. Co., San Francisco

FILES
Atkins Saw Div., Seattle, Portland, San Francisco

Nicholson File Co., Providence, R. I.
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland, Seattle, San Francisco.

FIRE PUMPS
Beaver State Supply Co., Portland, Ore.
Munnell & Sherrill Inc., Portland, Ore.

FLEXIBLE COUPLINGS
Northwest Chains & Sprockets, Inc., Seattle, Portland

FRICTION BLOCKS
Champion Friction Co., Eugene

GANG SAWMILLS
Albany Machine & Supply Co., Albany, Ore.
Keystone Machine Works, Roseburg, Ore.
"Sunbo" Mill Engineering & Supply, Seattle, Wash.
Portland Machinery Co., Portland, Ore.
"Premier" Dominion Bridge Co., Vancouver, B.C.
"Soderhamns" Sumner Iron Wks., Everett, Wash.
Johnson Manufacturing Co., Seattle, Wash.
Superior Mills, Inc. Dallas, Oregon
"Twin-Kut" Guy W. Conner, Inc., Portland, Ore.

GEARS AND GEAR MOTORS
Link-Belt Co., Seattle, Portland, San Francisco
J. W. Minder Chain & Gear Co., Portland, Ore., Los Angeles, Calif.
Ohio Gear Co., Cleveland, Ohio
Pacific Gear Works, Los Angeles, San Francisco
Western Gear Works, Seattle
Western Machinery Corp., Portland, Ore.

GLUES
Reichhold Chemicals, New York City, N. Y.

GRATES—WATER COOLED
T-M. Water Cooled Products, Portland

GRINDING WHEELS
Borg Warner Corp., Atkins Saw Div., Indianapolis, Ind.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.; Seattle, Portland, San Francisco
Simonds Saw & Steel Co., Fitchburg, Mass.; Seattle, Portland, San Francisco

HOGS
Portland Machinery Co., Portland, Ore.
Sumner Iron Works, Everett, Wash.

HOSE
Aero Coupling Corp., Burbank, Calif., Portland, Ore.
Goodyear Rubber & Asbestos Co., Portland, Ore.
Goodyear Tire & Rubber Co., Akron, Ohio; Seattle, Portland

HOT PLATE PRESSES
Allied Northwest Machine Tool Corp., Portland, Ore.
Columbia Div. of The Lodge & Shipley Co., Hamilton, Ohio
Heyer Sales & Engineering Co., Tacoma, Wash.
Siempelkamp-Heyer Sales & Engineering, Tacoma Wash., Wilco Machine Works, Memphis, Tenn.
Williams-White & Co., Moline, Ill.

INSTRUMENTS AND REPAIRS
Instruments Sales & Service, Portland, Ore
Moore Dry Kiln Co., No. Portland, Ore.

KEYSEATING MACHINES
McIlvanie Machine Works, Yakima, Wash.

KILNS
Herbert Fryer, Carnation, Washington
C. M. Lovsted Co., Seattle, Wash.; Portland, Ore.; San Francisco, Calif.
Moore Dry Kiln Co., Jacksonville, Fla.; North Portland, Ore., Brampton, Ont., Vancouver, B. C.

KILN PAINT
The Gorton Co., Portland
Moore Dry Kiln Co., North Portland, Ore., Jacksonville, Fla., Vancouver, B. C., Brampton, Ontario

KNIVES
Ohio Knife Co., Cincinnati, Ohio, Portland, Ore., Seattle, Wash., Los Angeles, Calif., Oakland, Calif., Vancouver, B. C.
Simonds Saw & Steel Co., Fitchburg, Mass., Seattle, Wash., Portland, Ore., San Francisco, Calif.
Ray Smythe, Portland, Ore.

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

BUYERS GUIDE and CLASSIFIED SECTION

CUT YOUR DRY-KILN COSTS DURALASTIC BRAND

Gilsonite Roof Coating · Gilsonite Plastic Cement · Industrial Paints
Gilsonite Kiln Compounds · Aluminum Plastic Coating · Wood Preservatives

Application Department
Power Supply Equipment

The Gorton Company

Free Estimates On Dry Kiln and Roof Maintenance

MANUFACTURERS
2455 N.W. 29th AVE. • PORTLAND 10, OREGON • BE. 2837

GENERAL'S–New Hard Tipped Chain

Saw Bar Fits ALL Makes of Power Saws

ASK ABOUT OUR NEW POND & DECK CHAIN SAW BARS

Distributor Territory Available

GENERAL SAW & REPAIR CO.
2710 N. Interstate Ave.
Portland 12, Ore. GArfield 8558

SEATTLE
3628 East Marginal Way
MAin 8629

NORTHWEST CHAINS & SPROCKETS INC.

PORTLAND
123 S. W. Pine
ATwater 5002

JEFFREY MFG. CO. • WHITNEY CHAIN CO.
FABCO FLEXIBLE COUPLINGS • AMERICAN PULLEY CO.
EBERHARDT-DENVER Speed Reducers
CHAINS, INC. Agricultural Chains

"One GOOD air photo is worth 10,000 words"

WESTERN WAYS, Inc.

AERIAL INDUSTRIAL PHOTOGRAPHERS

275 Vera Drive Corvallis, Oregon

(Formerly known as Valley Flying Service, Inc.)

Continually serving the industries of the West with air photos of highest quality

Oblique—Vertical—and our popular enlargements hand colored in natural oil

NO DEPOSITS . . . NO CONTRACTS . . . Just advise us of your exact plant location . . . then see and select your photos. Numerous flights to all areas.

BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

For Multiple Sawing of Your Small Logs
Use **KEYSTONE** 4 SAW GANG MILL
Write For Details
KEYSTONE MACHINE WORKS
136 S. Stephens St. • Roseburg, Ore. • Phone 3-4144

Call BADER or CARROLL
NEW & USED MACHINERY & EQUIPMENT
CApitol 1013
LIQUIDATIONS • INSPECTIONS

FOR SALE

USED AIR COMPRESSORS
Sullivan twin horizontal 450 cu. ft., good condition
Chicago Pneumatic 315 cu. ft. horizontal
Allis-Chalmers model A band mill, 8-ft., used very little
Pacific Edger 8 x 60, used six months, anti-friction bearings, heavy duty.....$2950.00
Portland Iron Works 8 x 60 edger, with 200 HP direct connected; year old; excellent condition. Ross Fork Lift Truck, 14,000 lbs. Clark Fork Lift Truck, 6000 lbs.

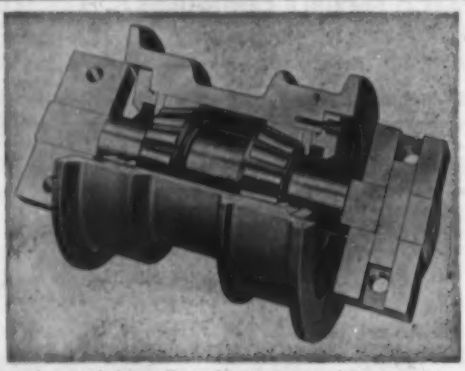
VARIABLE SPEED ELECTRIC DRIVES for .....
1. SAWMILL CARRIAGES
2. VENEER LATHES
3. PLANERS
4. RESAWS
5. HEAVY MACHINE TOOLS

Veneer, Sawmill, machine shop equipment
Prescott-Seattle Trim Saws, Edgers, Carriages, Electric Setworks
WEBSTER MACHINERY CO.
820 1st Ave. So. MUtual 0233 Seattle 4, Wash.

Save Money on Tractor Upkeep!

D & M TRACTOR ROLLER ASSEMBLY

For D-8, D-7 and TD-18 Tractors



- D & M roller has positive seal on shaft-keeps dirt and moisture out of bearings and keeps grease in.
- D & M roller allows you to enjoy months of maintenance free roller service—no greasing necessary.
- D & M roller has Timken & Tyson tapered roller bearings, smooth running—no friction—makes lower fuel costs.
- D & M roller is packed with Calol OHT grease-temperature range from 300 F.—to +20F.
- D & M roller shell is one piece cast 4140 steel-heat treated.
- D & M roller shell can be hard surfaced. Parts renewed as needed at comparable prices.

NO GREASING NECESSARY
EUGENE EQUIPMENT CO.
EUGENE, OREGON PHONE 5-8458
COMPLETE LINE OF LOGGING SUPPLIES. PROMPT DEPENDABLE SERVICE.

LOADBINDERS
Atkins Saw Div.—Borg-Warner Corp. Indianapolis, Ind.
Thomas Laughlin Co., Portland, Maine.
Campbell Chain Co., York, Pa.
S. G. Taylor Chain Co., Hammond, Indiana

LOCOMOTIVES
Lima Loco Works, Lima, Ohio; Seattle

LOGGING BLOCKS, SUPPLIES AND TOOLS
Anderson Steel Products Co., San Francisco, Calif.
Berger Engineering Co., Inc., Seattle
Eugene Equipment Co., Eugene, Ore.
Howard-Cooper Corp., Portland, Seattle
Skookum Co., Inc., Portland, Ore.
Washington Iron Works, Seattle

LOGGING ENGINES
Berger Engineering Co., Inc., Seattle
Skagit Steel & Iron Works, Sedro Woolley, Wash.
Washington Iron Works, Seattle
Waukesha Motor Co., Waukesha, Wisc., Seattle, Wash.; Portland, Ore., San Francisco Los Angeles, Calif.

LOGGING TRAILERS
Fruehauf Trailer Co., Portland, Ore.; Seattle, Wash.
Peerless Trailer & Truck Service, Inc., Portland, Ore.

LUMBER CARRIERS AND LIFT TRUCKS
Clark Equipment Co., Battle Creek, Mich., Portland, Ore., Seattle, Wash.
Gerlinger Carrier Co., Dallas, Ore.
General Machinery Co., Portland
Hyster Co., Portland, Seattle
Hyster Sales Co., Portland
Ross Carrier Line—Clark Equip. Co. Portland, Seattle, San Francisco

LUMBER FINANCING
Douglas-Guardian Warehouse, Corp., New Orleans, La., Portland, Ore., Los Angeles, Calif., San Francisco, Calif.

LUMBER STACKERS, UNSTACKERS, LOADERS AND HOISTS
Moore Dry Kiln Co., Vancouver, B. C., Brampton, Ont., Jacksonville, Fla., North Portland, Ore.
Williamette Machine & Welding, Salem, Ore.

MACHINERY—SPECIAL
Kimwood Machine Co., Cottage Grove, Ore.
Western Machinery Corp., Portland, Ore.

MATERIAL HANDLING EQUIPMENT
Western Machinery Corp., Portland Ore.

OILS AND GREASES
General Petroleum Corp., Los Angeles, San Francisco, Portland, Seattle
Lubriplate Div., Fiske Bros. Refining Co., Newark, N. J.; Seattle, Portland
Shell Oil Co., Los Angeles, San Francsico, Portland, Seattle.
Standard Oil Co., San Francisco, Seattle, Portland, Spokane, Tacoma, Medford.
Texas Company, The, Seattle, Portland, San Francisco
Tide Water Associated Oil Co., San Francisco, Calif., Los Angeles, Calif., Portland, Ore., Seattle, Wash.
Union Oil Co., Los Angeles, San Francisco. Portland, Seattle

OUTBOARD MOTORS
Evinrude Motors, Milwaukee, Wisconsin
Johnson Motors, Waukegan, Ill.

PAINTS
Gorton Co., The, Portland
Moore Dry Kiln Co., Vancouver, B. C., Brampton, Ont.; Jacksonville, Florida; North Portland, Oregon

PIKE POLES—ALUMINUM
Alloy Welding & Fabricating Co., Portland

PIPE, TANKS, STACKS
Federal Pipe & Tank Co., Seattle
Seattle Boiler Works, Seattle, Wash.

PLANING MILL AND WOODWORKING MACHINERY
General Machinery Co., Portland
Greenlee Tool Co., Rockford, Ill.
Irvington Machine Works, Portland, Ore.
Mereen-Johnson Machine Co., Minneapolis Minn.
Newman Machine Co., Greensboro, N. C.
Stetson-Ross Mach. Works, Seattle.
Yates-American Machine Co., Beloit, Wis.

PLANT DESIGN AND CONSTRUCTION
W. H. Rambo, Portland, Ore.

PLYWOOD AND VENEER MACHINERY AND SUPPLIES
American Mfg. Co., Tacoma, Wash.
Coe Mfg. Co., Painesville, Ohio; Portland, Ore.
Columbia Div. of The Lodge & Shipley Co., Cincinnati, Ohio
Heyer Sales & Engineering Co., Tacoma, Wash.
Hamilton, Ohio
Mereen-Johnson Machine Co., Minneapolis Minn.
Moore Dry Kiln Co., Vancouver, B. C., Brampton, Ont., Jacksonville, Fla., North Portland, Ore.
Reichhold Chemicals, Inc., New York City, N. Y.

Webster Machinery Co., Seattle
Williams, White & Co., Moline and Chicago, Ill.; Seattle
Yates-American Machine Co., Beloit, Wis.

POWER BRAKES
Roberts Motor Co., Portland, Ore.
Westinghouse Pacific Coast Brake Co., San Francisco, Los Angeles, Portland, Seattle

POWER DRIVES
The Oilgear Co., Milwaukee, Wisc., Portland, Ore., Los Angeles, Calif., Cleveland, Ohio. Detroit, Mich.

POWER PLANT BRICK WORK
F. E. Balden & Co., Portland

POWER SAWS
Atkins Saw Div., Borg-Warner Corp. Indianapolis, Seattle, Portland, San Francisco
Henry Disston & Sons, Seattle, Portland, San Francisco
Foster-McCulloch Company, Eugene, Oregon
Homelite Corp., Port Chester, N.Y., Seattle, Wash.
McCulloch Motors Co., Los Angeles, Calif.
Oregon Saw Chain Mfg. Corp., Portland
Zidell Machinery & Supply Co., Portland, Ore

PUMPS
Foster-McCulloch Company, Eugene, Oregon

RADIO EQUIPMENT MANUFACTURERS
General Electric Company, Electronics Dept., Syracuse, N. Y.; San Francisco, Portland, Seattle

RAILWAY EQUIPMENT
Baldwin-Lima-Hamilton, Lima, Ohio
Guy W. Conner, Inc., Portland, Ore.
Hyman-Michaels Co., Portland
Moore Steel Service Co., Inc., Eugene, Ore.

REFUSE BURNERS
Anderson Blowpipe & Mfg. Co., Seattle
Archer Blower & Pipe Co., Portland, Ore.
C & D Welding Co., Redding, Calif.
Pacific Wire Works Co., Inc., Seattle
Rees Blowpipe Mfg. Co., San Francisco, Los Angeles
Seattle Boiler Works, Seattle

RUBBER SPECIALTIES
American Rubber Mfg. Co., Oakland, Calif.; Portland, Ore.
Gates Rubber Co., Denver, Colo.
Scougal Rubber Mfg. Co., Seattle
U. S. Rubber Co., New York, N.Y., Portland, Ore., Seattle, Wash., Los Angeles, Calif.

SAFETY HATS
Foster-McCulloch Company, Eugene, Oregon

SAP STAIN PREVENTIVES
Chapman Chemical Co., Memphis, Tenn.; Portland, Ore.
Dow Chemical Co., Midland, Mich.
E. I. DuPont de Nemours & Co., Inc. (Grasselli Chemical Dept.) Seattle, Portland, ping Div., Chicago, Ill.
R. T. Vanderbilt Co., New York City; Portland, Ore.

SAWS, KNIVES AND CUTTERHEADS
Atkins Saw Div., Seattle, Portland, San Francisco
Banta Saw Works, Redding, Calif.
Jones & Orth Cutterhead Co., Seattle, San Francisco
Ohio Knife Company, Seattle, Portland, Oakland, Cincinnati, Ohio
Pacific Saw & Knife Co., Portland
Shortt Saw & Knife Company, Tacoma, Wash.
Simonds Saw & Steel Co., Fitchburg, Mass.; Seattle, Portland, San Francisco
Spear & Jackson, Ltd., Vancouver, B.C.

SAWS, POND AND DECK
Kliever Machine Shop, Medford, Ore.

SAWMILL ERECTION
Ward, M. A. Construction Co., Eugene, Ore.

SAWMILL MACHINERY
Albany Machine & Supply Co., Albany, Ore.
American Saw Mill Machinery Co., Hackettstown, N. J.
Armstrong Manufacturing Co., Portland, Ore.
Bader & Carroll, Portland
Banta Saw Works, Redding, Calif.
Corinth Machinery Co., Corinth, Miss.

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

Ask for details about
"IDEAL" SIDEHEAD GRINDER
bench type
SHORTT SAW & KNIFE COMPANY
621 E. 11th St., Tacoma 2, Wash.
Phone Broadway 2309

MYERS POLE SHAVERS
Manufacturer - Sales - Installation
16 inch single head for simplicity and smooth finish. Capacity to 28" pole diameter. 20 ft. and up.
Claude Myers — P. O. Box 171 — Troy, Montana — Phone 3113

Archer Blower & Pipe Co.
BLOWER SYSTEMS
REFUSE BURNERS - FANS - REPAIRS
INDUSTRIAL SHEET METAL WORK
Portland 1 — BRdwy 3642 — Seattle 8 — MOhawk 1945

ILWACO BOOM POND BOATS
Increase Mill Production
ILWACO BOAT WORKS
Ilwaco, Washington
Phone Mission 2-4193

You Can Be SURE If You Call
McPHEETERS ELECTRIC
3796 Franklin Blvd., Eugene, Ore.
PHONE 5-1652 or 5-0430
Sawmill and Industrial Wiring
Westinghouse Motors and Control
Installations - Preventative Maintenance

MEEKER CONTROL VALVES
For Air or Steam Are
SIMPLE ..... LONG-LIFE
STURDY ..... LOW MAINTENANCE
DEPENDABLE POSITIVE ACTION
Serving Industry for over 14 years. Tell us your valve problems—We can help you. Write for descriptive circular.
Meeker Valve Co.
DALLAS, OREGON — PHONE—3824

BUYERS GUIDE and CLASSIFIED SECTION

PHELPS BROS.
REFUSE BURNERS
BLOW PIPE SYSTEMS
EUGENE, OREGON
Mail—Rt. 1, Box 701 — Phone 4-5821

FOR MILL SUPPLY SERVICE
MUNNELL & SHERRILL, INC.
Four Service Stores
Portland & Eugene, Ore.
Arcata & Ukiah, Calif.

WESTERN MACHINERY CORPORATION
Distributors for
Transmissions and Materials-Handling Equipment
SPECIAL MACHINERY DESIGNED EQUIPMENT FOR INDUSTRY
1035 S.E. Ninth Ave.
Portland 14, Ore. — EM. 4117

$ SAVE TIME AND MONEY $
with the Willamette BOX CAR LOADER
- Eliminates Need of Docks
- Saves Carrier Time
- Pays for Itself Quickly

"Loaders Like It"
Gas or Electric Power
WILLAMETTE MACHINE and WELDING CO.
555 Wallace Rd., Salem, Ore., Phone 3-5693
Some Choice Dealer Territories Available

Headquarters for WILLIAMS WHITE & CO. HOT PRESSES
The majority of hot presses in the West are
WILLIAMS WHITE
A Complete Line of Maintenance Machine Shop Tools—
Lathes, Drill Presses, Saws, etc.
Information and Literature Gladly Supplied
ALLIED NORTHWEST MACHINE TOOL CORP.
103 S.W. Front St. — Portland, Oregon — Phone BE-1412

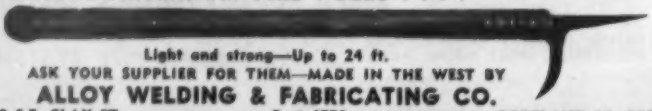
BUYERS GUIDE and CLASSIFIED SECTION

Be sure to read the latest FOREST INDUSTRIES NEWS section in each issue of THE LUMBERMAN.

HEYER *Sales and Engineering Company*
1003 WASHINGTON BLDG., TACOMA 2, WASHINGTON
Representing
G. SIEMPELKAMP & CO.— plywood, hardboard and chipboard presses
RUCKLE—Guillotine type veneer jointers
JOHNSON CITY FOUNDRY & MACHINE WORKS—veneer slicers

SUPERIOR
PORTABLE GANG SAW MILLS
GUY W. CONNER, INC.
We buy and sell railroad rails and scrap
2584 NW Northrup • Portland, Oregon • BEacon 5883

STEPHENS ALUMINUM PIKE POLES . . . .



Light and strong—Up to 24 ft.
ASK YOUR SUPPLIER FOR THEM—MADE IN THE WEST BY
ALLOY WELDING & FABRICATING CO.
409 S.E. CLAY ST. East 4771 PORTLAND 14, ORE.

R and B COMPANY
Expert Woodworking — Planer Rebuilding — Trouble Shooting
AT YOUR PLACE OF OPERATION—ALL WORK GUARANTEED
Box 149, Winchester, Oregon — Ray Divers, Manager — Phone Roseburg, Oregon: 3-4743

AIR COMPRESSORS—New and Used
LARGEST STOCK ON THE PACIFIC COAST
ROGERS MACHINERY CO.
Eugene, Oregon—Phone 4-9478
5035 S.E. 17th Ave., Portland, Ore. Phone - FI 6478 2915 "P" St., Eureka, Calif. Phone - Hillside 2-1086

STAR VALUES — IN STOCK

PLANERS—MATCHERS—MOULDERS
1—No. 8-B Newman 4x14" planer, matcher and moulder, 75 FPM, 4-knife, new
1—No. 500 Newman 6x14" planer and matcher, 200 FPM, 6-knife, new
1—No. 512 Newman 8x16" planer and matcher, 325 FPM, 8-knife, new
1—No. 55 Newman feed table, new
1—Prineville planer feed table, new
1—C4A Yates 8x4" moulder, rebuilt
1—No. 10 Berlin 24x10" planer and matcher
1—GK Hanchett 38" knife grinder, new
1—No. 2390 Jones & Orth side head grinder, new
1—No. CT-18 Hanchett grinder, new
1—Merkley combination side head grinder, setting stand and knife grinder, new

SAW MILL EQUIPMENT
1—Mitts & Merrill V-type fuel hog
1—No. 45 Sumner fuel hog, steel rotor
1—4x54" Schurman gang edger, new
1—No. 106 Tower 42" edger, new
1—4x36" Minor 3-saw gang edger, new
1—No. 4 Star top saw rig, new
1—11"x38' Phoenix shotgun feed
1—7½ HP Blue Babe pond saw, new
1—Tuway safety saw guide, new

BAND AND CIRCULAR SAW MILLS
1—54" McDonough band mill, new
1—American Porta-Mill, new
1—No. 1 American steel mill, new
3—No. 4 Star mills, new

BAND RESAWS—BAND RIP SAWS
1—42" Turner twin band resaw, 30 HP
1—44" Yates No. 283 band resaw, roller bearings
1—48" Turner single band resaw
1—54" Yates No. 340 horizontal band resaw
1—84" Yates V-84 ball bearing vertical band resaw, rebuilt

STAR MACHINERY COMPANY
SPOKANE, E. 415 Sprague Avenue, Riverside 6121 — SEATTLE, 241 Lander Street, ELliott 0760 — PORTLAND, 801 S. W. Front Avenue, ATwater 7395

Corley Mfg. Co., Seattle, Portland, Chattanooga
Crown Machinery & Supply Co., Portland
Dominion Bridge Co., Ltd., Vancouver, B.C.
General Machinery Co., Portland
Irvington Machine Works, Portland
Johnson Engineering Works, I. W., Tacoma, Wash.
Kimwood Machine Co., Cottage Grove, Ore.
Klamath Iron Works, Klamath Falls, Ore.
Klamath Machine & Locomotive Works, Klamath Falls
Mater Machine Works, Corvallis
McDonough Mfg. Co., Eau Claire, Wis.
Mereen-Johnson Machine Co., Minneapolis
Mill Engineering and Supply Co., Seattle
Munnell & Sherrill Inc., Portland, Ore.
Newman Machine Co., Greensboro, N. C.
Northwest Marine Iron Works, Portland
Olympia Supply Co., Olympia, Wash.
Peters Co., The, Portland
Portland Machinery Co., Portland
Prineville Machine & Supply Co., Prineville, Oregon
Salem Equipment & Supply Co., Salem, Ore.
Soule Steam Feed Works, Meridian, Miss.
Star Machinery Co., Seattle, Spokane, Portland
Sumner Iron Works, Everett
Superior Mills, Inc. Dallas, Oregon
Ward Construction Co., M. A., Eugene, Ore.
Webster Machinery Co., Seattle
Wheland Co., The, Chattanooga, Tenn.; Portland
Zidell Machine & Supply Co., Portland, Ore.

SAW SHARPENING MACHINERY
Armstrong Manufacturing Co., Portland, Ore.
Bunta Saw Works, Redding, Calif.
Hanchett Mfg. Co., Big Rapids, Mich., Portland, Ore.
Neilsen's Saw & Supply, Winston, Ore.

SIDE HEAD GRINDERS
Shortt Saw & Knife Company, Tacoma, Wash.

SPARK ARRESTERS AND ARRESTER CLOTH
American Sheet Metal Works, Portland
Roebling's, John A. Sons Co., Trenton, N. J.; San Francisco, Portland, Seattle

SPRINGS—ALL KINDS
Betts Springs Co., Chicago, Ill., Seattle

STEEL STRAPPING
Acme Steel Co., Chicago, Ill., Los Angeles, Calif., San Francisco, Calif., Seattle, Wash., Portland, Ore., Vancouver, B. C.
Signode Steel Strapping Co., Spokane, Seattle, Portland, San Francisco and Los Angeles.
United States Steel Co., Gerrard Steel Strapping Div., Chicago, Ill.

TIRES AND RECAP
Goodrich Co., B. F., Akron, Ohio
Goodyear Tire & Rubber Co., Akron
U. S. Rubber Co., Truck Tire Div., New York, N. Y.

TORQUE CONVERTERS
Twin Disc Clutch Co., Seattle, Portland, Racine, Wis.

TRACTORS, EQUIPMENT AND ACCESSORIES
Allis-Chalmers Co., Milwaukee, Spokane, Portland, Seattle
Caterpillar Tractor Co., Peoria, Ill.; Seattle, San Leandro, San Francisco, Portland, Spokane
Collins Machinery Co., Seattle
Howard-Cooper Corp., Portland, Seattle
Hyster Co., Portland
International Harvester Co., Chicago
Oliver Corp., Cleveland Tractor Div., Seattle, Portland, San Francisco
Tulsa Winch, Div. of Vickers, Inc., Tulsa, Oklahoma
Wood Tractor Co., Portland

TRUCKS, TRAILERS, ACCESSORIES
Diamond T Trucks, Chicago, Ill., San Francisco, Calif., Los Angeles, Calif., Seattle, Wash., Portland, Ore.
Ford Motor Co., Dearborn, Mich.
International Harvester Co., Chicago
Kenworth Motor Truck Corp., Seattle, Portland
Mack Manufacturing Co., Long Island City, N. Y., Seattle, Wash.
Northwest Truckstell Sales, Portland, Ore.

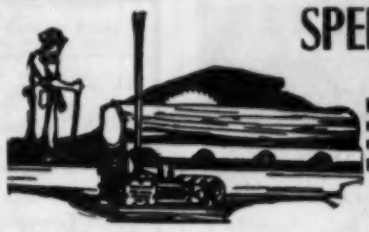
RAILS

Relaying Rails — Angle Bars — Track Accessories — Cars of All Types — Used Car Parts — Construction Equipment

We Buy Obsolete Cars and Locomotives and Abandoned Trackage for Dismantling Purpose

HYMAN-MICHAELS COMPANY

CHICAGO 2200 JERROLD AVE. SAN FRANCISCO 24 ST. LOUIS
NEW YORK Phone MISSION 7-3631 LOS ANGELES



SPEE-D-TWIN STEAM FEED

helps the small and medium size sawmill to make a profit through GREATER PRODUCTION without increased expense.

Uses no more steam than belt or friction feeds. Less expensive to operate. Much faster. Full details in Catalog W. Yours for the asking.

SOULÉ
STEAM FEED WORKS
MERIDIAN, MISSISSIPPI

Parkersburg Rig & Reel Co., Los Angeles, Calif.
Peerless Trailer & Truck Service, Inc., Portland, Ore.
Reliance Trailer & Truck Co., San Francisco
Roberts Motor Co., Portland
Trailmobile Company, The Berkeley, Calif.
Truck & Industrial Equipment Co., Portland, Ore.
Tulsa Winch, Div. of Vickers, Inc., Tulsa, Oklahoma
White Motor Co., Seattle, Portland, San Francisco

TRUCK EQUIPMENT

Truck & Industrial Equipment Co., Portland, Ore.

TRUCK TRANSMISSIONS AND CONVERSIONS

Eaton Manufacturing Co., Cleveland, Ohio
Fuller Mfg. Co., Kalamazoo, Mich.
Roberts Motor Co., Portland
Timken-Detroit Axle Co., Detroit

VALVES

Davies, E. C., Portland
Meeker Valve Co., Dallas, Oregon
Rus Chamberlin Co., Portland, Ore.
Valvair Corp., Akron, Ohio

WEED AND GRASS CONTROL

Chipman Chemical Co., Bound Brook, N. J.
Dow Chemical Company, Midland, Mich.
E. I. DuPont de Nemours & Co., Inc., CMU Division, Wilmington, Del.

WELDING SUPPLIES

Industrial Air Products Co., Portland

WIRE ROPE

American Chain & Cable Co., Bridgeport, Conn.
Bethlehem Steel Co., San Francisco, Portland, Seattle
Broderick & Bascom Rope Co., Seattle, Portland, San Francisco, Los Angeles, Calif.
Edwards Company, E. H., San Francisco, Los Angeles, Portland, Seattle
Leschen Wire Rope Div. H. K. Porter Co., Inc., Seattle, Portland, San Francisco. Angeles, Portland, Seattle
Macwhyte Co., Kenosha, Wis.; Seattle, Portland, San Francisco, Los Angeles
Roebling's Sons Co., John A., Seattle, Portland
U. S. Steel Corp., Seattle, Portland, San Francisco
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Division . . . Denver, Seattle, Portland, San Francisco, New Orleans, Spokane

WORK and TUG BOATS

L. S. Baier and Associates, Portland, Ore.
Ilwaco Boat Works, Ilwaco, Wash.

WOOD PRESERVATIVES

Chapman Chemical Co., Memphis, Tenn.; Portland, Ore.
Du Pont, E. I. de Nemours & Co., Seattle, Portland, San Francisco
R. T. Vanderbilt Co., Inc., New York, N. Y., Portland, Ore.

4 Speeds Instead of 3

WATSON Brown-Lipe Model 6041
Combines 6231-A gears with 6231-B. Have Gear Splits and Power in Your Truck.

NORTHWEST TRUCKSTELL SALES
835 S.E. Hawthorne Blvd. Portland, Ore.
EAst 1114

SOMETHING NEW.... SOMETHING PROVEN

SWIVEL ARCH LINE HOOK
FOR TRACTOR LOGGING

PROVEN ADVANTAGES

1 - COMPLETE 360° SWIVELING ACTION.
2 - KEEPS THE ARCH LINE FREE FROM KINKING AND TWISTING.
3 - PREVENTS PREMATURE FAILURE OF THE ARCH LINE.
4 - DISTRIBUTES LOAD GOING OVER FAIRLEAD OF THE ARCH PREVENTING WOOD BREAKAGE.
5 - DECREASES ARCH LINE WEAR.
6 - RELATIVELY LIGHT AND FLEXIBLE MINIMIZING THE EFFORT OF ATTACHING THE CHOKER LINE.

Available in 5" and 5½" "D". These sizes represent the most desirable of the lines. Other sizes available on special order.

Recessed --- smoothly tapered sleeve for Arch Line.
Heavy Hubs for protection of Line, Sleeve, and Screw Pin.
Rounded Swivel assembly preventing any battering or burring.
360° Swiveling action.
Properly shaped Hook insuring the maximum number of chokers with strokes evenly distributed.

Pat. pending

ANDERSON
STEEL PRODUCTS
500 BRANNAN STREET, SAN FRANCISCO, CALIFORNIA
California-Oregon Distributor
FRED E. BARNETT CO.
1655 CUSTER AVENUE, SAN FRANCISCO, CALIFORNIA

The IDEAL SHARPENER For Pond & Deck Saw Units Ripping Units

"NIELSEN" CHAIN GRINDER

Pat. Applied For

L-M EQUIPMENT CO.

401 S.E. Clay St. Portland 14, Ore. PHONE: VE-3146
36 - 5th Street Eureka, California PHONE: Hillside 2-2515

Descriptive Folder and Price on Request

PERFORMANCE GUARANTEED

NIELSEN'S SAW & SUPPLY

P.O. Box 181 Winston, Oregon
Phone Roseburg 9-8484

PROFESSIONAL SERVICES

W. H. RAMBO
Industrial Plant Engineer
SPECIALIZING IN . . . Sawmills, Woodworking and Veneer Plants, Paper Mill Wood Rooms, Hardboard Plants and Wood Preserving Plants.
Design, Estimates, Supervision Construction
Unencumbered by affiliation with any manufactured products.
LOYALTY BUILDING
BE. 5101 Portland 4, Ore.

Harry R. Powell
Consulting Engineers
Industrial Buildings — Bridges — Marine Structures
Smith Tower — Seattle, Wash. — Phone ELliott 3362

PETER KOCH
Consulting Engineer
Specializing in Planing mills and Wood Processing Plants
ARCTIC BLDG.,
SEATTLE, WASHINGTON
Phone SEneca 7885

HERBERT FRYER
LUMBER DRYING ENGINEER
DESIGN - CONSTRUCTION - OPERATION
Carnation, Washington
Phone: Fall City 33-6121

JOHNSON & JOHNSON
CONSULTING ENGINEERS
BOARD, FELT, PAPER & GYPSUM PLANTS
211 PORTLAND TRUST BLDG.
PORTLAND, OREGON
Main Office
CHICAGO, ILL. HOUSTON, TEX.

M. A. WARD
CONSTRUCTION CO.
Sawmill Designing Construction and Machinery Installation, Consultation Service
Our Designing Service will always lower the final cost, and many times represent the difference between success and failure of an operation.
391 E. Third Ave., Eugene, Ore., Phone 4-5531

ENGINEERING SERVICE
STRUCTURAL AND MECHANICAL
Industrial Plant Layout—Sawmills
Power Plants—Heating—Ventilating—Plumbing
Reports, Designs, Drawings, Specifications
A. L. SWANSON AND COMPANY
CONSULTING ENGINEERS
2210 West 12th Ave., Vancouver 9, B. C.
CEdar 1154

BRUNING
Copyflex Machines
Blue Prints and Photos
Engineering and Drafting Supplies
317 S. W. Third Ave. Portland, Ore.
AT. 2344

K. B. Wood & Associates, Inc.
Forest Management
Timber and Development Appraisals
Logging Engineering and Surveying
Aerial Mapping
2623 N.W. Industrial St. Portland, Oregon
COLUMBIA 2485-86

F. E. BALDEN COMPANY
Mechanical Engineers and Contractors
122 S. W. First Ave.
Portland 4, Oregon
Phone: Atwater 5652
Atwater 6095

INDUSTRIAL DEVELOPMENT CO.
3011 Chandler St. Tacoma 2, Wash.
DESIGNERS & CONSULTING ENGINEERS FOR HARDBOARD & OTHER WOOD UTILIZATION PLANTS
Development and "Mock-Up" Facilities
PHONE HAwthorne 4413 Dale L. Schubert

Luster Engineering & Machine Works
PACIFIC PLANER and MATCHERS
RESAWS, EDGERS, LOADERS and TURNERS, FEED TABLES and SAWMILLS
3709 University Way NE P. O. Box 67
Melrose 1224 Seattle 5, Wash.

MECHANICAL LOG BARKERS
Nicholson Manufacturing Company
Designers—Builders of Special Machinery and Plants
5416 14th Ave., N.W. HEmlock 0133 Seattle, Washington

POSITION WANTED

Lumberman, University graduate, former W.P.A. Inspector, thirty years with leading Western Pine Manufacturers as General Superintendent, Assistant Manager, Sales. Best of references and detailed information on request. Now available. Sales work preferred in Bay Area or Los Angeles. Write TL, Box 1025, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

SALESMAN

With 17 years experience in field sales work, sales management and mill operations—well acquainted with many lumber buyers throughout Southwest and Midwest—seeks sales or buying arrangement and investment opportunity with progressive remanufacturing or wholesale firm. Write TL, Box 1030, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

POSITION WANTED

Sawmill supt. large mill, 18 yrs. with present employer desires change. Prod. record good. Know lbr. & mfg. Want comparable position or better. Well qualified. Smaller mill o.k. No short life operation acceptable. Exc. ref. **Write TL, Box 1031, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.**

WANTED—LUMBER BUYER

Medium sized yard. Must be able to cover mills and be thoroughly familiar with fir and redwood lumber grades and production areas. Please state complete background and experience. References required. Write TL, Box 1032, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

POSITION WANTED

Aggressive young man seeks position as Sales Manager for small Pine Mill or capable of handling Asst. Sales Mgr. job for larger mill. Experienced and can furnish excellent references. Write TL, Box 1033, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

"True Experiences and Gripes of a Lumber Grader"

Mimeographed copy fifty cents each

Gustav E. Reichenbach

418 E. Pacific Spokane, Wash.

FOR SALE

One Fairbanks-Morse generator unit, Size 300 kva 440—3 bays. Complete with switchboard. Powered with 350 hp Fairbanks-Morse diesel engine, 257 rpm. Generator unit and engine in good condition. $6,900.00 FOB

Empire Redwood Co. Gualala, Calif.

Phone 2731

FOR SALE

Complete Planing mill, including burner. Same can be moved. Capacity 75M to 100M per 8 hours. Can be seen in operation for the next 30 days. Automotive equipment included. Price $40,000.00 Terms to the right party. Reason for selling—insufficient supply. Write TL, Box 1029, c/o THE LUMBERMAN, 71 Columbia St., Seattle 4, Wash.

For Sale—Used Band Mills

One right-hand and one left-hand #2 Allis-Chalmers Type B 9' Band Mills, including both pulleys. Flat belt drive. In good condition. Immediate delivery. Inquiries solicited. **Crossett Lumber Company, A. T. McDonough, Crossett, Arkansas.**

FOR SALE

"Chain Saw 3 HP 20" Chipper Chain. Complete kit, special offer, $169.50. Parts arrive ready for assembly. Cuts all angles, guaranteed performance. One and two man saws; many models. Assemble-Yourself. Save. Trail Blazer Products, Box 5142, Grosse Pointe, Michigan

FOR SALE

New 60" I. W. Johnson Horizontal Resaw for bevel siding, 7" face wheels, anti-friction bearings throughout. (In stock—good price—inventory reduction.) I. W. Johnson Engineering Co., 601 E. 11th St., Tacoma, Wash.

WHEN YOU

WRITE OR PHONE

ADVERTISERS,

IT WILL HELP

ALL OF US

IF YOU WILL

MENTION

THE LUMBERMAN

SAWMILL EQUIPMENT

First Class Condition—Bargain Priced

1—2500 K.W. General Electric Turbine, 2300 V. 160 # PSI, complete with condensers, pumps and control panels.
1—Hammer Head Crane, 8000 # capacity, 80' radius built by Hecco Ersted Company, company with ½ trolley wire and 1248' rail.
1—26' 3-arm Simonsen Turner on 5-15/16x24" Shaft, steam operated hook arm and 14"x36" steam cylinder. Three skid cant lift with 10"x12" steam cylinder.
1—Log Haul with 14"x36" flanged cable drum complete.
1—3-arm Slop and Loader with 16"x16" steam cylinder.
1—Overhead canting gear.
1—12"x60" Six Saw L. H. Pacific Coast Sumner Edger.
1—21 saw 38' Prescott Overhead Mechanical Trimmer, complete with 75 HP, 1200 RPM, 440-V motor.
1—84" Prescott L. H. Vertical Band Resaw, ball bearing, complete.
1—#444 Stetson Ross Sizer, 20"x8", with top, bottom and 2 side heads, complete.

COMPLETE FILING ROOM EQUIPMENT:

1—30" Woods #236 Automatic Wet Straight Wheel Knife Grinder.
1—#8 Armstrong Saw Roller & Stretcher, 18" bench type.
1—73" size 46 Hand Circular Saw Sharpener.
1—#35 Covel Circular Saw Sharpener.
1—#93 Covel Automatic 72" Circular Saw Sharpener.
1—#4 Armstrong Band Saw Sharpener with 4-floor stands.
1—#150-R Covel Band Saw Sharpener with 5 floor stands.
2—10"x36"x5" Saw Anvils.
1—#5 American Side Head Cup Grinder with Jointer Attachments.
1—7"x10" Twin Cylinder Reversing Hoisting Engine.
1—Slasher Saw 15' 5 saw with 12 chain feed table.
1—400-HP, 1200 RPM, 440-V, GE Type I, Electric Motor with starting panel.
1—400-HP, 600 RPM, 2300-V, GE Type TS, Form AL126 exciation volt Synchronous Motor with starting equipment.
1—150 HP, 435 RPM, 440-V, GE Type I, Slip Ring Motor with controls.
1—100-HP, 900 RPM, 440-V, Westinghouse Type CS, motor with starting equipment.
1—75-HP, 1200 RPM, Westinghouse motor with starter.
1—50-HP, 900 RPM, Westinghouse motor with starter.
1—50-HP, 900 RPM, Allis-Chalmers motor with starter.
20—Reduction Geared Motors from 5 to 25 hp., various RPM's. (write for list)
Conveyor chain of all sizes and types, live rolls, shafting boxes, cylinders and other transmission equipment.

Write for Complete List of All Our Equipment On Hand

OLYMPIA SUPPLY CO.

625 Columbia St. Phone 6659

Olympia, Washington

BUYERS GUIDE and CLASSIFIED SECTION

LUBRIPLATE

GOODYEAR RUBBER & ASBESTOS CO.

Industrial and Mill Supplies

205 N.W. 5th AVENUE

PORTLAND 9, OREGON

AT. 8575

Machinery For Sale

See Our Ad in Last Month's Issue

GOLDSTEIN & BLOCH

BOX 33 AB.1234

ABERDEEN, WASH.

DONKEYS

Buy, Sell or Rent

BIGELOW MACHY. CO.

LOGGERS DREAM DISTRIBUTOR

3825 S.E. Malden St., TAbor 4908, Portland, Ore.

EQUIPMENT FOR SALE

BAND MILLS

1—6' Phoenix, Roller Bearing

CARRIAGES

1—Peters 3 block, 54 inch opening, hydraulic set

EDGERS

1—McDonough, 6x54 Eastern type, air locks on shifting levers, watercooled bearings

PLANERS - MOULDERS

1—Woods 404B, 6x30, 8 knife, ripping attachment, with or without profile, rebuilt
1—Yates 91, 6x20, 8 knife
1—Yates C5S, 12" Electric Moulder
1—Yates C1-10" Moulder, 6 knife, with profiles
1—American 77A, Double profiler, 18x6

GRINDERS

1—Hanchett 4 G Automatic Gang Grinder
1—Covel-Hanchett, size 18, Band Wheel Grinder

WOODWORKING EQUIPMENT

1—Twin 54" Yates Resaw
1—American 25 Straight Line Rip Saw, BB motorized
1—Yates #135 Cut Off Saw
1—American #112, 6x26 Double Surfacer
1—Yates-American #213 motorized Glue Jointer
1—Madison Straight Line Cut Off Saw, #224, motorized
1—Berlin #196 Jointer 24"

CARRIERS

1—Ross Series 91-7956, 52x67 package
1—Ross Series 90-7056, 52x58 package
1—Ross Series 90-6856, 52x54 package
2—Ross Series 90-6544, 52x40 package
2—Ross Series 50-6144, 42x48 package
1—Ross Series 70x5445, 42x40 package
2—Ross Model 12-6144, 42x48 package
2—Ross Model 11-6144, 42x48 package
1—Hyster Model M2-5766, 52x54 package
2—Hyster Model M2-4560, 42x48 package
1—Hyster Utility, 42" package
1—Hyster Utility, 42x48 package, V-8 engine

SPECIAL PRICE

1—Hyster Model KT Lift Truck, 14' lift, pneumatic tires, chain hoist,
Price: $1,250.00

1—Ross Model 11 Carrier, 42x48 package,
Price: $750.00

2—Hyster Utility, Model CP, 52x53 package,
Price: ..... $1,000.00 each

TWO PRACTICALLY NEW GMC 671 DIESEL ENGINES

New General Machinery Company Ripsaws for Gang Ripping, for immediate delivery.
New General Machinery Company Automatic Planer Feed Table, immediate delivery.
New General Machinery Automatic Two Saw, One Man Trimmer, push button control.

ABOVE SUBJECT TO PRIOR SALE

GENERAL MACHINERY COMPANY

122 S. W. First Avenue Portland, Oregon Phone: At-6573

Chippers

CARTHAGE MULTIKNIFE CHIPPER
Since 1894

Uniform Chips
from
Whole Logs - Slabs - Waste
Preliminary Data Gladly Supplied

Knives

HEPPENSTALL E. I. S. ALLOY CHIPPER KNIVES

First in Solid Alloy
First in Quality
"the most dependable name in forgings"

RAY SMYTHE CO.

501 PARK BLDG. PORTLAND 5, OREGON PHONE: BEacon 0502-2238

TRI-STATE TRACTOR ROLLERS AND IDLERS

The Replacement Rollers and Idlers that are Sweeping the Country . . . . . Present Users, Best Salesmen.

TRACK ROLLER GUARDS Sectional-Heavy-Duty D-7, D-8, TD-9, TD-14, TD-18, TD-24

CLUTCH LINKS Solid Rivit, Welded Band D-7, D-8

Heavy-Duty Fenders for TD-18 and TD-24

ROLLERS Non-Barreling, 1-Piece, Long-life Induction hardened, Double Heat-Treated D-6, D-7, D-8, TD-24, HD-19, HD-20 Z

Heavy-Duty Canopies for International, Allis-Chalmers Tractors

TRACK MASTER PINS Solid Pin, Tapered Plugs D-7, D-8 HD-20

IDLERS Heavy-Duty Solid-Rib 200# Heavier D-8

Socket Head Repair Bolts Forged Solid Screw D-8

Seals - SURE SEAL - Double Seal for Blowout Protection - Rollers, Idlers - FINAL DRIVE BELLOWS SEALS

COMPLETE REBUILDING SERVICE ON ROLLERS & IDLERS—Guaranteed Work

UNIVERSAL EQUIPMENT, INC. • **4190 Franklin Blvd.** • **Eugene, Oregon** • **Tel.: 5-2618**

ALBANY 7 ft. MILL
Built in 6, 7, 8 and 9 ft.

ALBANY

IF IT'S A BAND MILL YOU ARE THINKING OF — BE SURE AND SEE ALBANY — FOR THE BEST FOR LESS

It pays for itself over a circular in a short time in kerf alone, plus better manufactured lumber.

Outstanding Features:

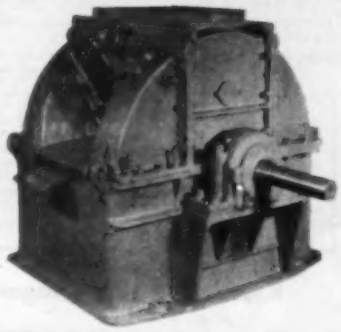
- Upper safety pressure type guide.
- Straining device is knife edge type throughout and is absolutely anti-friction.
- Top wheel can be moved towards or away from the saw-line without changing the strain ratio.
- Tilting of upper wheel is accomplished by raising only one of the columns independent of the other by disconnecting the jaw clutch.
- Adjustment for upper wheel for cross line by special eccentric shafts in upper end of column.
- . . . . and many other Outstanding Features FOUND ONLY IN ALBANY.

Other ALBANY products we manufacture:

Random Length Trimmers — Air-Lift Overhead — Air-Lift Undercut, Wheel Type — Selective & Automatic Overhead — *Resaws* — *Line Bars* — And Other Sawmill Machinery. Chain Drive Trimmer.

ALBANY MACHINE AND SUPPLY COMPANY ALBANY, OREGON
Re'ne Fritz, Manager • Telephone 1341

DO YOU HAVE A CHIPPER OR HOG FUEL PROBLEM?



If so, we are headquarters for DIAMOND HOGS & DIAMOND CHIP MILLS. We can supply you with data about how profitable use can be made with DIAMOND HOGS for either chipping or hog fuel.

WRITE AND TELL US YOUR PROBLEM

The PORTLAND MACHINERY CO.

208 S.W. FIRST **PORTLAND 4, OREGON**

Phone: ATwater 6554

Complete Line of Sawmill and Woodworking Machinery

LET US PUT "POWER" IN YOUR PRODUCTION

WITH KIMWOOD

LINE BARS
BAND RESAWS
END PRINTERS
BRIDGE CRANES
PONY TRIMMERS

LOG CARRIAGES
BAND HEAD RIGS
LIVE LOG DECKS
CIRCLE SAW HUSKS
SMOOTH END TRIMMERS

A NAME TO KEEP IN MIND

KIMWOOD

KIMWOOD MACHINE CO.

COTTAGE GROVE, OREGON
PHONE 1010

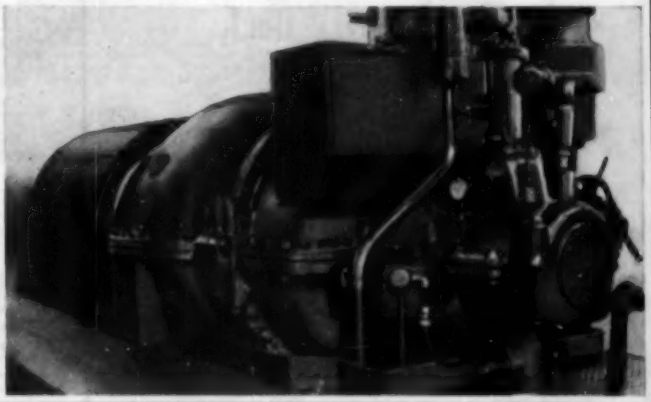
T-M
Water Cooled Grates
"They Last for Years"
T-M Water Cooled Products
2401 N.W. 22nd, Portland 10, Oregon, BR. 6591

SWEDISH LOG & CANT
GANG MILLS
We Are Distributors For:
MILL ENGINEERING & SUPPLY CO.
PRESCOTT IRON WORKS
ARMSTRONG MFG. CO.
CROWN
MACHINERY & SUPPLY
FRED G. SWENSSON THOS. I. HALEY
2135 N. W. 29TH AVE. BR. 0600
PORTLAND 10, OREGON

SCOUGAL RUBBER MANUFACTURING CO.
WE CAN MANUFACTURE ANYTHING OF RUBBER
2731 First Ave. So. Seattle, Wash.

Cut Your Power Bills With Charles Weaver's Turbines
Let Us Tell You How

STOCK TURBINES, Condensing: 300KW.: 2-750KW. G. E. 150#, 480.: 2-1000KW. A-C. 150#, 480.: 1500 KW. West. 175#, 480Y.: 1000KW. 8 stage, 125#, 2300V. NEW 1935.
BOILERS: 2 NEW, 350#, 150,000# Steam HR.: Many others.
DIESEL ENGINES: 2-F-M.O.P. Model 3808 ⅛, 1600 HP. @ 720RPM. Same as new. Many others.



CHARLES WEAVER

WO. 1-1340 **4145 Penobscot Building, Detroit 26, Michigan**

Fred V. Sams, Rep. 622 Henry Bldg., Portland Phone: BR. 3111

PLANING MILL, BOX FACTORY AND YARD

1—Woods #4042—8 knife 6"x30" hubb. bearing, belt driven matcher, with: hoods, upstakes, slip joints, jointers, serial 16809 with or without 100 HP motor and starter.

1—36" Mershon tandem twin, vertical, roller bearing, box factory, band resaw direct connected motor drive, serial No. 6130 and complete with 4 hand saws and 1—Woods 40 HP 900 RPM 3P 60C 220/440V motor, flexible coupling and Westinghouse manual starter. 1—Woods 15 HP 900 RPM 3P 60C 220/440V motor, flexible coupling and Westinghouse manual starter.

1—Wood frame steel top table 36"x72" push circular rip saw, movable guide, single saw, ball bearing arbor and complete with saws and 1—5 HP 1800 RPM 3P 440V S. B. motor and starter.

1—Mershon Ideal 46" single vertical hubb. bearing re-saw with gear motor on feed rolls and 25HP 3P 60C 440 V motor, starter, Vee belt drive.

1—Glued-up shook and machine made up of Mercon-Johnson double box board matcher, length and cross equalizers, feed chains, saws, motors and controls.

1—Eby shook automatic tie-up machine complete with motor, starter and spare parts.

1—Reese 90" single slow speed blower with outboard bearing, flexible coupling, 40" suction, 30"x30" discharge, 150 HP 720 RPM 3P 60C 440V type C. S. West. motor, base and type A West. auto. starter.

1—270 slow speed blower fan 75 HP 900 RPM 3P 60C 440V motor and starter—24" discharge.

2—12' cyclones and quantity of 24" dia. pipe.

1—Hyster 1941—Carrier 50"x60", 6 cyl. International 256 engine, 11.00x20" tires.

1—Ditto 1946.

1—Caterpillar No. 13,000 diesel power unit complete with radiator stuboh and steel sub-frame.

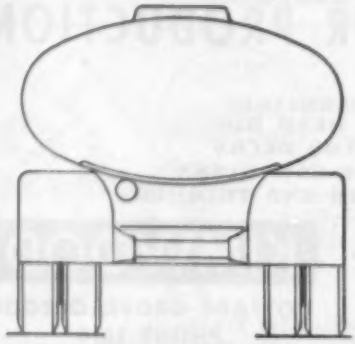
SAWMILL MACHINERY

1—50"x50" air cooled burner with corrugated inner wall and screen.

1—Hanchett 16" motor driven band saw grinder with: ball bearing arbor, power back feed and stands.

Complete Placer Unit: #818 Newman 8"x16" ball-bearing, belt driven matcher with top and bottom profiles, new feed table, 75 HP, 15 HP, 25 HP and 5 HP motors, starters disconnect switches, hoods #50 fan with 50 HP motor, 400 foot blow pipe, cyclone, floor chains for carrier packages, grading table, trimmer, sorter, gearmotors side head and knife grinder.

WALTER H. BEANE CO. • Telephone 5144 • Klamath Falls, Oregon



USED OVAL TRUCK & TRAILER TANKS
also used oval tank trucks & trailers

Suitable for road sprinkling, fire protection, petroleum dispensing, etc. Capacity 2,900 gal. up.

CALL BEALL FOR IMMEDIATE DELIVERY

PORTLAND UNiversity 3631 • BILLINGS 9-1929 • BOISE 3-3830

BEALL PIPE & TANK CORP. • 12005 N. Burgard, Portland, Ore.

S AND W SCHNITZER AND WOLF MACHINERY COMPANY

900 S.W. First Avenue

Portland, Oregon • Phone AT 9501

...slashes prices on top equipment

Write, wire or phone for specifications and low prices! Do it now!

NEW BRUSH MOTORS, 5 HP, 1800 rpm....$85.00

4x36 used Newport edger
4x36 new Evergreen edger
2-drum Clyde—new surplus
60 cu. ft. air compressor with 15 HP electric motor
1 used standard hydraulic feedworks
1 48" opening used all steel standard carriage
1 American No. 1 used sawmill
1 10-ton Atlas hand-operated hydraulic press
500 ft. used No. 78 chain
1 new 5¼x3½x5 Fairbanks-Morse duplex pump
200-amp. surplus welders
300-amp. surplus welders
400-amp. surplus welders

GET OUR PRICES ON THESE REBUILT GUARANTEED MOTORS

200 HP 1800 rpm motor
200 HP 720 rpm motor
150 HP 720 rpm motor
150 HP 1800 rpm motor
100 HP 1800 rpm motor
100 HP 720 rpm motor
75 HP 1800 rpm motor
75 HP 600 rpm slipring motor
25 HP 900 rpm motor

WE CUT ALL SIZE SPROCKETS TO ORDER

Cuts faster; Cuts cheaper

"S & W" Master POND or Dry Deck SAW

HIGH CUTTING SPEED RANGE of 95 to 140 strokes per min. Rocker motion imitates hand sawing. Clears the kerf at every stroke. No clogging! When cut is finished, saw is raised by means of a clutch connected to the driving gears.

Adapted to all size Pulp, Veneer, Plywood and Shingle Mills.

Standardized in 3 Models 24", 30", 48"

WRITE FOR FREE CATALOG!

Skeen Electric Feed Works
Speeds Production
Cuts Costs

The Skeen Electric Works Electric Feed Drive

OVER ONE HUNDRED (100) SKEEN ELECTRIC FEED DRIVES IN SUCCESSFUL OPERATION . . .

write for names of users . . .
Then ask users how Skeen Electric Feed drives increases production and cuts costs . . .

Call or Write for Details

SKEEN ELECTRIC WORKS

IN BUSINESS SINCE 1906

835 N. W. Everett St., Portland 9, Oregon — Phone: BR. 3416

PROFIT MAKERS

FROM OUR STOCK

MOTOR & GENERATORS

New 150 HP 1200 Allis Chalmers BB
New 150 HP 600 RPM BB Allis Chalmers
New 100 HP 1200 BB Allis Chalmers
Used 75 HP 1200 BB GE
Used 100 HP 1800 BB Allis Chalmers
Large stock of smaller motors and gearmotors
Used 25 KVA Westinghouse w/ controls
New 5 KVA ONAN Gas driven generator
New 750 WATT Gas driven generator

COMPRESSORS—NEW & USED

670 cu ft. Ingersol Imperial, Horizontal
420 cu ft. New Worthington Horizontal
284 cu ft. New Worthington air cooled
194 cu ft. New Worthington air cooled
230 cu ft. Ingersol Rand portable
160 cu ft. Ingersol Rand portable
122 cu ft. Used Worthington air cooled
65 cu ft. New Worthington air cooled

PUMPS—STEAM PUMPS

Worthington 5¼x3½x5
New Worthington 1" Cent. 50 GPM
Worthington 7½x5x6 Duplex boiler feed
Used Worthington 4" Centrifugal—1000 GPM
New Worthington 1½ Cent. 120 GPM
Log Wash units complete with spray
Other new and used pumps in stock

ENGINES & BOILERS

52"x20' 100 HP Code Boiler 195#
72"x18' 160 HP Code Boiler 150#
Caterpillar Diesel—low hours
11x12 Amco Center Crank 48x12 pulley
54"x14' HRT Ideal for dry kiln

HOISTS AND CRANES

Used American dbl. drum 24"x24" 40 HP
Used 10-ton Whiting 72' span 23' lift overhead crane
New 5-ton General Utility Beebe Bros. Hoist
New Elect. dbl. drum 22"x32" ⅝ or ⅞ line, speed 40 RPM, linepull 18,000 lbs. 25 HP direct current 230 volt all enclosed. Unusual bargain
New P&H 5-ton electric w/geared trolley
New Budget Hoists in stock

MILL EQUIPMENT

Used 10" and 12" full oscillating nigger
Used 8 & 10 full oscillating steam nigger
Used 20' Portland Iron log turner
New BE GE log turners
Used 3-arm log stop & loader, 42" arms, 16x20 cyl.
Used 2-arm log stop & loader, 36" arm, 12x16 cyl.
Sumner Gold Medal Shingle Machine
Used Sumner Standard shingle machine
2—used 42" Gerlinger carriers
Used Gerlinger lift 8,000# capacity
New and used chain, sprockets, gears, bearings

HOGS & CHIPPERS

New Diamond #45 Hog
New Diamond #35 Hog
New Diamond #25 Hog
Used #35 Diamond Hog
Used #40 Diamond Hog
Used Williams #4XA Hammer Hog 20x44 opening cap. 10 tons per hr.

EDGERS

Used 12x84" Allis Edger
Used 10x60" Allis LH roller brg. stub edger
New Schurman 6x48 stub edger
Used Burton 6x42 4-saw stub edger
Used Heaps 6x30 stub edger
Used 4x36 Newport BB table edger
Used 4x36 Tower table edger
New Wheland 3½x34 Roller Brg. edger

MACHINE SHOP

1—used 20" Webb Shaper
1—Sibley 28" Drill Press
1—Sidney 14"x8' gearhead lathe
1—#3 Cincinnati Universal Mill, motorized
1—used 2 HP 12"x2" Pedestal grinder
New #302 Pipemaster Threading machine
1—new Carroll-Jamieson 16"x10' Gearhead lathe
1—Barr Portable Keyseater
1—used 18" Atkins Power Hacksaw
1—used VOMac pipe threading machine
1—used 21" Hoefer Drill Press
1—Wells 8x16 Metal cutting bandsaw

LOG & CANT GANGS

New Marathon 20" Log or Cant Gang—easily portable on display at our store—see it run
Used 8x32 Wicks Cantgang

RESAWS

Used Marshon 54" BB Band Resaw
Used Marshon 54" Plain Bearing Band Resaw
Used 64" Yates V-50 Band Resaw, 8" blades, quick set
Used Marshon 84" Resaw, sawmill type—quicklever set
Used Trojan Cir. Resaw self cont. w/ air comp. & controls
Used American #4 40" Band scroll resaw, 5" blades

FEED WORKS

10"x42' shotgun feed
12"x36' shotgun feed
Monarch Double Friction Feed
10x18 Allis steam twin feed self-contained
Used 4x18 Peters Friction Feed
Salem Friction Feed used #158 Salem feed works
New 5x6 twin feed (Speed)
American 6x12 Dbl. Cyl. Sgl. Drum feed
7x12 Dbl. Cyl. Sgl. Drum feed

PLANERS—SURFACES—MOULDERS

8 knife Newman—like new
S.R. 17A 8K motorized Planer Matcher
Hall & Brown 8x15 6-knife Matcher
Newman #99 8x18 6K Planer Matcher—special price
Woods #600 8x24 8-knife Planer Matcher
American #77A Model 5 BB 8K Planer
Berlin #55 6x30 6-knife matcher with ripper
Woods 404B Ballbearing 6x18 planer
Woods #18 12x30 Timber Sizer
Stetson Ross #4 18"x30" Timber Sizer

KNIFE GRINDERS

New Dependable #98A5 36" motor drive, fully automatic knife grinder
New #102A sidehead & profile grinder
Used American 32" straight wheel grinder

HEAD RIGS AND CARRIAGES

48" 3 block Sel Set Riderless air carriage
Coriath Hydraulic Sawmill, Riderless carriage
48" 3 block Riderless Hydraulic carriage
New Wheland #36 portable mill
Used American #3 sawmill
8' Prescott Band Mill, RH
9' Union Bandmill, roller brg. RH
6' Yates Bandmill all cast, LH
54" Berlin Pony Band Mill, 7" blades
Portland Iron Wks. 60 opening, 3 block carriage elect. set.
1 Sumner Power Set Works for screw block
1 Sumner Iron Works 3-block R&P 36" opening, tapers, Elect. Set. Elect. Dogs, steel frame
3-Sumner 60" opening headblocks
#4 Trout Set works for Screw block

Many used bargains to choose from
ON DISPLAY: THE NEW CALVERT "SUPER SWEDE" CARRIAGE

FILING ROOM EQUIPMENT

New Armstrong #4 Band Saw Grinder
New Armstrong #4 Stretcher Roll
Used 24" #63 Covel Gang Saw Grinder
Used Covel #217 RH Band Saw Grinder
Used 150 RH Covel Band Saw Grinder
Used Hanchett #250 LH Band Saw Grinder motorized—Cap. 10" to 16"
Used Covel #118 16" RH Band Saw Grinder
Used Covel #115 RH Band Saw Grinder 10"
Covel #90 LH Band Saw Grinder
Used Covel #105 16" movable stretcher roll
Used Hanchett #724 36" Aut. Cir. Saw Grinder
Used Rodgers #6 6" Band Saw Grinder
Used Hanchett #95 Cir. Saw Grinder
Used Covel #12C Hand Gummer, cap. 72"
Used Covel-Blackmer 72" Gummer, motor drive
Used Covel #31 Large 72" Hand Gummer
Used Covel Carbide Saw Grinder
Used Automatic Cir. Saw Grinder, Cap. 44"
Used Hanchett #948 Cir. Saw Grinder
New Acme Cir. Saw Hand Gummer

SPECIAL NOTE: We are near the end of our liquidation of the Blagen Mill at Yamhill, Oregon—SPECIAL PRICES

THE PORTLAND MACHINERY COMPANY

Agents for WHELAND COMPANY Band Mills, Circular Sawmills, Edgers, Trimmers, Carriages. DIAMOND IRON WORKS—Fuel hogs. WORTHINGTON CORPORATION—Compressor-pumps. SCHURMAN MACHINE WORKS—Edgers, Hoists. ALLIS CHALMERS MFG. CO.—Motors, Controls, Drives, ARMSTRONG MFG. CO.—Filing room machinery. IRVINGTON MACHINE WORKS—Cutoff saws. ONAN—Electric plants. EIMCO—Air Motors, COMET—Radial Arm Saws. DAVIS & WELLS—Woodworking machinery. BE-GE Hydraulic Log turners. MARATHON and LINCK gang mills.

208 S. W. First Ave. — **Portland 4, Oregon** — **Phone ATwater 6554**

THE LUMBERMAN'S Advertising Index for August 1954

A

Acme Steel Company....109
Aeroquip Corporation....14
Albany Machine & Supply Company....144
Allied Northwest Machine Tool Corp....139
Allis-Chalmers Mfg. Co....52-53
Allis-Chalmers Mfg. Co....42
Alloy Welding & Fabricating Co....140
American Chain & Cable Company....48
American Sheet Metal Works....126
Anderson Blowpipe Mfg. Co., Inc....132
Anderson Steel Products Co....141
Archer Blower & Pipe Co....139
Atkins Saw Div., Borg-Warner Corp....133
Atlas Powder Company....81

B

Bader & Carroll....138
Bailey & Blendinger, Inc....25
Balden Company, F. E....142
Baldwin-Lima-Hamilton Co....46
Beall Pipe & Tank Corp....146
Beane, Walter H....135-146
Berger Engineering Company....32
Bethlehem Pacific Coast Steel Co....29
Bigelow Machinery....143
Broderick & Bascom Rope Co....4th Cover
Bruning Company, Inc., Charles....142

C

California Plating Works, Inc....136
Caterpillar Tractor Company....2nd & 3rd Cover & 9
C & D Welding Company....134
Chain Belt Company....13
Champion Friction Company....127
Chapman Chemical Company....21
Chevrolet Motors Div., General Motors Corp....44
Chrysler Corporation, Ind. Eng. Div....23
Clark Equipment Company....19
Coe Manufacturing Company....132
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Division....71
Columbia Division of The Lodge & Shipley Co....114
Conner, Inc., Guy W....140
Corley Manufacturing Co....66
Crown Machinery & Supply Co....145
Cummins Engine Company....34-35
Cunningham Manufacturing Co....135

D

Denver Fire Clay Company, The....101
Detroit Diesel Engine Div., General Motors Corp....15
Dodge Manufacturing Company....100
Dow Chemical Company....119

E

Eaton Manufacturing Company....40
Edwards Company, E. H....65
Electric Steel Foundry....41
Empire Redwood Company....143
Eugene Equipment Company....138
Evinrude Outboard Motors....50

F

Federal Pipe & Tank Company....135
Ford Motor Company, Truck Division....113
Foster-McCulloch Company....130
Fryer, Herbert....142
Fuller Manufacturing Co....87

G

Galland-Henning Mfg. Co....67
Gates Rubber Company....54
General Electric Co., Electronics....39
General Machinery Company....143
General Petroleum Corporation....10
General Saw & Repair Company....137
Gerlinger Carrier Company....27
Goldstein & Bloch....143
Goodyear Rubber & Asbestos Co....143
Goodyear Tire & Rubber Co....1
Gorton Company, The....137
Graton & Knight Company....123
Greenlee Bros. & Co., Woodworking Machy....112

H

Hansel Engineering Co....83
Harnischfeger Corporation....36-73
Heller, Walter E. & Co....103
Heyer Sales & Engineering Co....140
Hoe & Company, R....49
Homelite Corporation....31
Hyman-Michaels Company....141
Hyster Sales Company....135

I

Ilwaco Boat Works....139
Industrial Air Products Co....127
Industrial Development Co....142
Instrument Sales & Service Co....136
Irvington Machine Works....33
International Harvester Co., Ind. Power....6-7
International Harvester Co., Truck Div....38

J

Jacksonville Blow Pipe Co....128
Johnson & Johnson....142
Johnson Manufacturing Co....133

K

Keystone Machine Works....138
Kimwood Machine Company....145
Klamath Iron Works....24
Klamath Machine & Locomotive Works....125
Kliever Machine Shop....136
Koch, Peter....142

L

Link-Belt Company....11
Link-Belt Speeder Corp....102
Lufkin Rule Company....126
Luster Engineering & Machine Works....142

M

Maritime Shipyards....134
Mater Machine Works....130
McDonough Manufacturing Co....133
McPheeters Electric Co....139
Medford Blow Pipe Company....127
Meeker Valve Company....139
Mereen-Johnson Machine Co....95
Moore Dry Kiln Company....125
Munnell & Sherrill, Inc....139
Murray Manufacturing Co., D. J....131
Myers Pole Shaving Machines....139

N

Newman Machine Company....99
Nicholson File Company....45
Nicholson Manufacturing Co....84-85-142
Nielsen's Saw & Supply Co....141
Northwest Chains & Sprockets, Inc....137
Northwest Engineering Company....5
Northwest Marine Iron Works....3
Northwest Truckstell Sales Co....141

O

Oliver Corporation....30
Oliver Iron & Steel Corp., Berry Div....55
Olympia Supply Company....143

P

Pacific Body Builders....129
Pacific Saw & Knife Company....136
Parkersburg Rig & Reel Company....47
Peoria Malleable Casting Co....110
Phelps Brothers, Inc....139
Portland Chain Manufacturing Co....130
Portland Machinery Co....145
Powell, Harry R....142
Preco, Incorporated....20
Premier Manufacturing Co....131

R

R & B Company....140
Rambo, W. H....142
Reichhold Chemicals, Inc....111
Roebling's Sons Company, John A....37
Rogers Machinery Company....140

S

Salem Equipment & Supply Co....129
Schnitzer & Wolf Machinery Co....146
Scougal Rubber Mfg. Co....145
Seattle Boiler Works....135
Shell Oil Company....17
Shortt Saw & Knife Company....139
Signode Steel Strapping Company....133
Skagit Steel & Iron Works....121
Skeen Electric Works....147
Smith Lumber Co., Ralph L....128
Smythe Company, Ray....144
Soule Steam Feed Works....141
Spear & Jackson, Ltd....60
St. Paul & Tacoma Lumber Co....60
Standard Oil of California....2
Star Machinery Company....140
Stetson Ross Machinery Co....105
Sumner Iron Works....77-79
Swanson & Company, A. L....142

T

Terminal Sales Building....135
Tide Water Associated Oil Co....69
Timken-Detroit Axle Co., Axle Div....92-93
T-M Water Cooled Products....145
Trailmobile, Inc....107
Truck & Industrial Equipment Co....127
Tulsa Winch, Division of Vickers, Inc....4

U

Universal Equipment Co....144
Union Oil Company....51
U. S. Rubber Company, Gillette Tires....122
U. S. Rubber Company, Mech. Goods....89
U. S. Steel Company, Gerrard Strapping....43
Utility Trailer Mfg. Co....91

V

Vanderbilt Company, R. T....108

W

Ward Construction Co., M. A....142
Washington Iron Works....97
Weaver, Charles....145
Webster Machinery Company....138
Western Machinery Corp....139
Western Ways, Inc....137
White Motor Company....26
Willamette Machine & Welding Co....139
Woods & Associates, Inc., K. B....142
World Bestos....22

Y

Yates-American Machine Co....18

Z

Zidell Machinery & Supply Co....114

"LOOKS LIKE OUR CAT* ENGINES WILL RUN FOREVER"

R. H. BYLES OF BYLES, JAMISON LUMBER CO., FRESNO, CALIF.

These four Caterpillar D13000 Engines, hooked up to a 400-KW generator, have been powering the Byles, Jamison mill for 13 years. Installed in 1941, they work a 5½-month season each year, and their hour meters now show well over 18,000 hours.

The mill is located at Bear Meadow, south of Dinkey Creek, at an elevation of 5500 feet. The average cut is 100,000 b.f. per day, and the power produced by the four engines turns 30 motors, running the 9-foot bandsaw, headrig, edger, resaw and trimmer. A Caterpillar D4600 Electric Set, operating 16 hours a day, supplies light for the camp—35 family houses, seven bunkhouses, mess hall, shop and garage.

Mr. Byles reports exceptional dependability and practically no down time. "I don't think we could buy any better equipment for the woods or for the mill," he says. "It looks like our Cat Engines will run forever!"

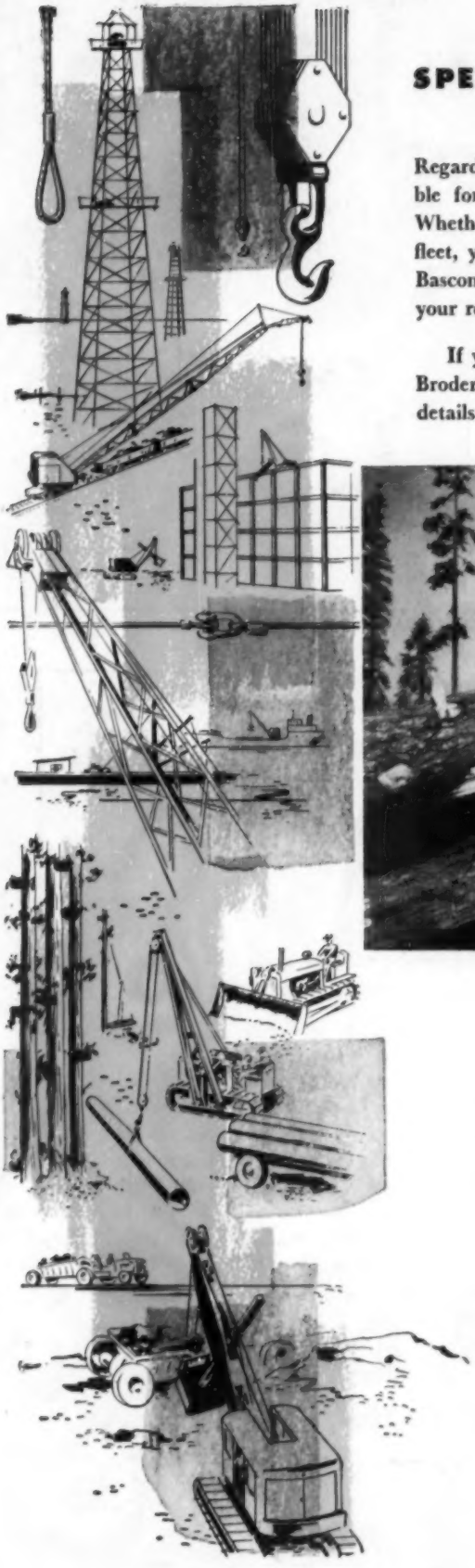
Are you getting the steady, reliable power you need to run your sawmill at full capacity month after month? It can cost you a lot of lost production to tinker with an uncertain engine. Check over your down time records. Then talk to your Caterpillar Dealer. He has the right engines for your mill—12 sizes up to 500 HP, electric sets to 315 KW. And he'll back their long work life with prompt service and genuine parts. Call him now.

Caterpillar Tractor Co., San Leandro, Calif.; Peoria, Ill., U.S.A.

CATERPILLAR*

*Both Cat and Caterpillar are registered trademarks—®

SPECIFY CAT POWER FOR HIGH-PROFIT PRODUCTION



SPEEDI-SERVICE IS FOR ALL WIRE ROPE USERS!

Regardless of the amount of wire rope you use, you're eligible for the money-saving advantages of Speedi-Service. Whether you have a 2-ton hoist or a 100-unit earthmoving fleet, you can register your needs with your Broderick & Bascom distributor. Then, when replacement is needed, your rope will be ready in minutes instead of hours.

If you're not already saving time and money, call your Broderick & Bascom distributor and ask him to explain details of the Yellow Strand Speedi-Service!

THIS IS SPEEDI-SERVICE . . .

The wire rope requirements of your equipment are registered on permanent record cards by your Broderick & Bascom distributor. When a rope is needed, call your distributor and tell him what machine needs what line. He'll consult his records to determine what length, type, construction and grade of rope is needed. The correct rope will be taken from stocks controlled by your records and will be ready for you in a matter of minutes.

You eliminate costly record keeping, big stocks and downtime. You make money on the long run of precision-built Yellow Strand Wire Rope!

BRODERICK & BASCOM ROPE CO.
655 Edmunds Street — Seattle, Wash.

Specify

Yellow Strand®

For Savings . . . Safety . . . Speedi-Service